



50 lb. Sectionalized Shipboard Laundry Dryer Models

L36TD30ME,

L36TD30MS

(NSN: 3H 3510-01-340-9419)

(NSN: 3H 3510-01-312-4422)

440V. A.C. 60 CYCLE 3 PHASE

TECHNICAL MANUAL

INSTALLATION OPERATION
SERVICE PARTS

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THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

MAN 3 4 4 1/98 - 5C - WB TECHNICAL MANUAL #S6162-BS-MMC-010/12489

IMPORTANT NOTICES—PLEASE READ

For optimum efficiency and safety, we recommend that you read the Manual before operating the equipment. Store this manual in a file or binder and keep for future reference.



WARNING: For your safety, the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury, or loss of life.

- Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
 - Do not try to light any appliances.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Clear the room, building, or area of all occupants.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach the gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.



WARNING: In the event the user smells gas odor, instructions on what to do must be posted in a prominent location. This information can be obtained from the local gas supplier.



WARNING: Wear Safety Shoes to prevent injuries.



WARNING: Purchaser must post the following notice in a prominent location:



FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.



WARNING: A clothes dryer produces combustible lint and should be exhausted outside the building. The dryer and the area around the dryer should be kept free of lint.



WARNING: Be safe, before servicing machine, the main power should be shut off.



WARNING: To avoid fire hazard, do not dry articles containing foam rubber or similar texture materials. Do not put into this dryer flammable items such as baby bed mattresses, throw rugs, undergarments (brassieres, etc.) and other items which use rubber as padding or backing. Rubber easily oxidizes causing excessive heat and possible fire. These items should be air dried.



WARNING: Synthetic solvent fumes from drycleaning machines create acids when drawn through the dryer. These fumes cause rusting of painted parts, pitting of bright or plated parts, and completely removes the zinc from galvanized parts, such as the tumbler basket. If drycleaning machines are in the same area as the tumbler, the tumbler's make-up air must come from a source free of solvent fumes.



WARNING: Do not operate without guards in place.



WARNING: Check the lint trap often and clean as needed but at least a minimum of once per day.



WARNING: Alterations to equipment may not be carried out without consulting with the factory and only by a qualified engineer or technician. Only **Cissell** parts may be used.



WARNING: Remove clothes from dryer as soon as it stops. This keeps wrinkles from setting in and reduces the possibility of spontaneous combustion.



WARNING: Be Safe - shut main electrical power and gas supply off externally before attempting service.



WARNING: Never use drycleaning solvents, gasoline, kerosene, or other flammable liquids in the dryer. **FIRE AND EXPLOSION WILL OCCUR. NEVER PUT FABRICS TREATED WITH THESE LIQUIDS INTO THE DRYER. NEVER USE THESE LIQUIDS NEAR THE DRYER..**



WARNING: Never let children play near or operate the dryer. Serious injury could occur if a child should crawl inside and the dryer is turned on.



WARNING: Never tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer. These fibers cause skin irritation if they become mixed with other fabrics.



WARNING: Before operating gas ignition system - purge air from Natural Gas or Propane Gas Lines per manufacturer's instructions..

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CISSELL DRYER WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of two (2) years from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than two (2) years due to normal wear and tear, and with respect to all new repair or replacement parts for Cissell equipment for which the two (2) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell.

CISSELL MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

For warranty service, contact the Distributor from whom the Cissell equipment or part was purchased. If the Distributor cannot be reached, contact Cissell.

IDENTIFICATION NAMEPLATE






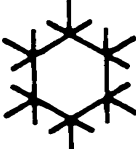
The Identification Nameplate is located on the rear wall of the dryer. It contains the dryer serial number, product number, model number, electrical specifications and other important data that may be needed when servicing and ordering parts, wiring diagrams, etc. Do not remove this nameplate.

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SHIPBOARD LAUNDRY DRYER



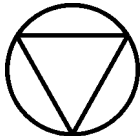

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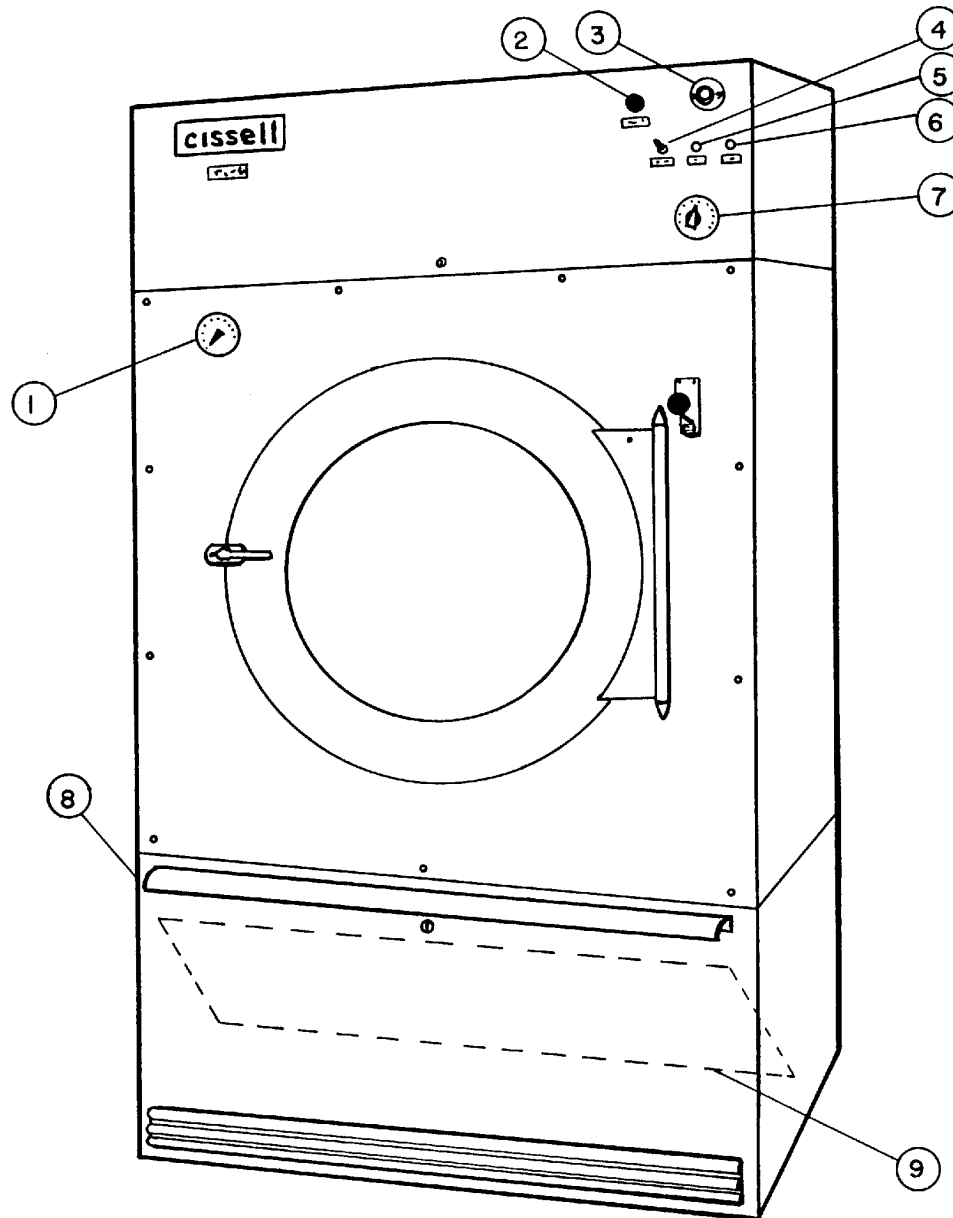
SYMBOLS

The following symbols are used in this manual and/or on the machine. The numbers between () refer to the numbers on the machine surveys.

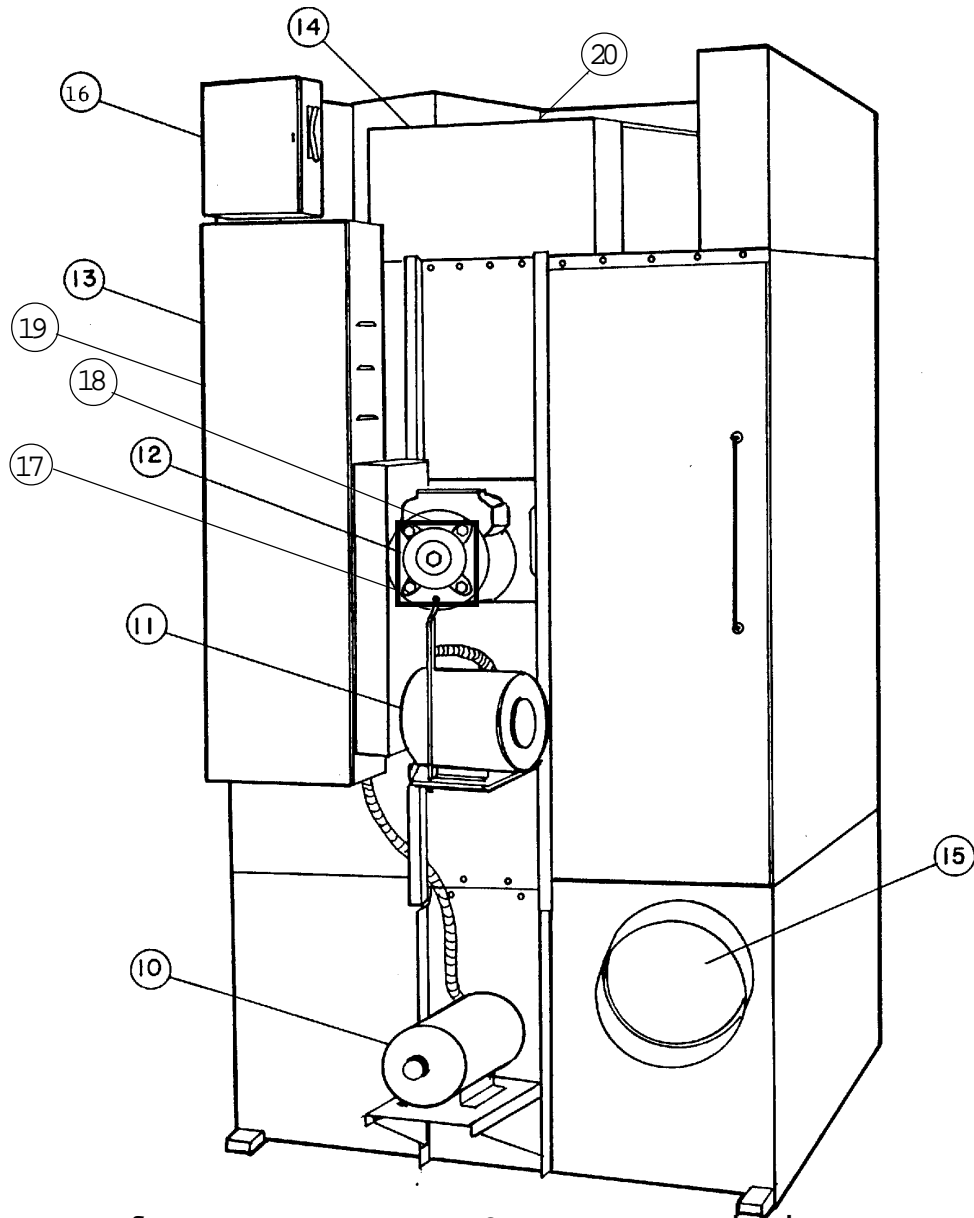
Symbol	Description	Part/Measurement
	NOTE!	
	Hot! Do Not Touch Heiß! Nicht Berühren Haute temperature! Ne pas toucher Caliente! no tocar	
	dangerous voltage tension dangereuse Gefährliche elektrische Spannung tension peligrosa	
	on marche Ein conectado	
	off arrêt Aus desconectado	
	start demarrage Start arranque de un movimiento	
	emission of heat in general émission de chaleur en general Warmeabgabe allgemein emisión de calor	
	cooling refroidissement Kühlen enfriamiento	

SYMBOLS

Symbol	Description	Part / Measurement
	rotation in two directions rotation dans les deux sens Drehbewegung in zwei Richtungen movimiento rotativo en los dos sentidos	
	direction of rotation sens de mouvement continu de rotation Drehbewegung in Pfeilrichtung movimiento giratorio o rotatorio en el sentido de la flecha	
	End of Cycle	
	caution attention Achtung atencion; precaucion	

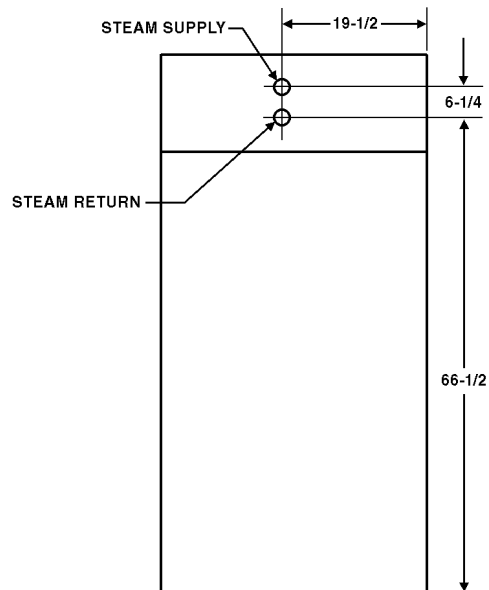
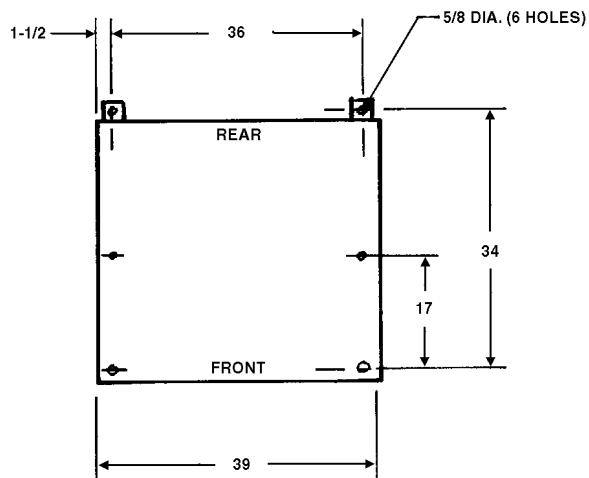
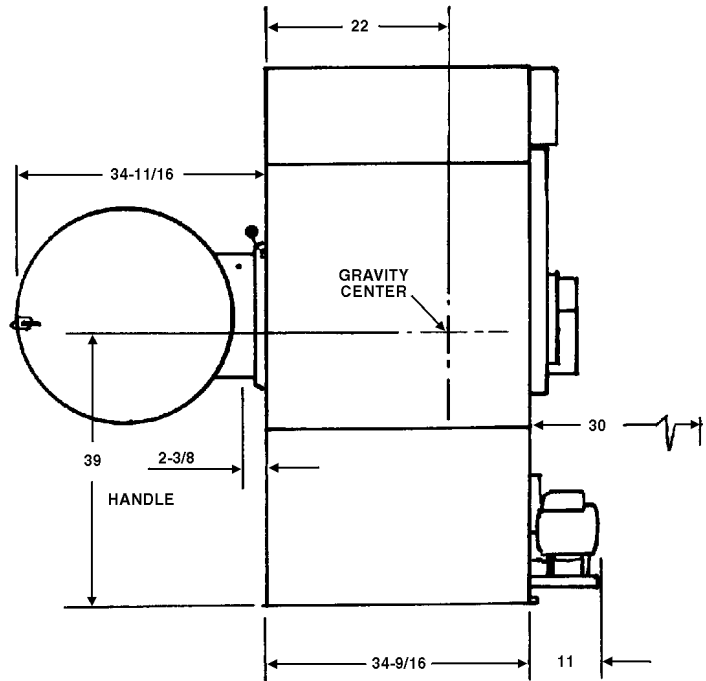
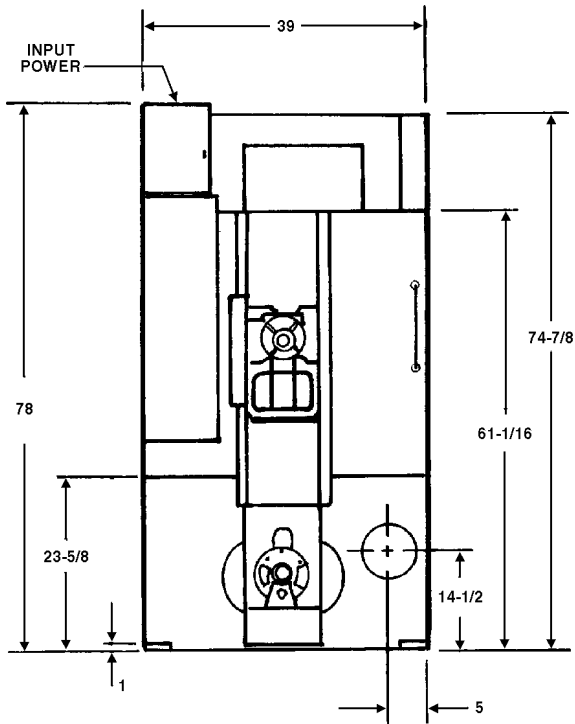
ELECTRIC AND STEAM HEATED DRYERS**FRONT VIEW**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
1	TU10528	Thermometer for Basket Temp.
2	PT111	Start Button
3	TU5004	Temperature Range Selector
4	FG147	On/Off Power Switch
5	TU5421	Cool-Down Cycle Lamp
6	TU5421	Drying Cycle Lamp
7	TU4862	Drying Cycle Timer
8	TU10521	Lint Trap Access Door
9	TU5261	Lint Collector Screen

ELECTRIC AND STEAM HEATED DRYERS**REAR VIEW**

<u>Ref. No.</u>	<u>PART NO.</u>	<u>Description</u>
10	MTR302	Fan Motor
11	MTR302	Basket Motor
12	TM100	Gear Reducer
13	TU11812	Control Box Assembly Steam
14	TU11850	Heating Unit, Electric
15		Exhaust Vent
16	TU10646	Fuses Power Input Disconnect Box
17	TU10917	Cover, Housing
18	TU10916	Housing
19	TU10453	Control Box Assembly Electric
20	TU11202	Heating Unit Steam

DRYER DIMENSIONS **L36TD30M**



ELECTRIC HEATED**L36TD30ME**

Heat Capacity	3 6 KW
Net Weight (approx.)	790 lbs.
Domestic Shipping	1050 lbs.
Weight (carton approx.)	
Export Shipping	1200 lbs.
(1 box approx.)	
Export Shipping Dimensions	88" (L) x 45" (W) x 58" (H)
Export Crating	148 cu. ft.

BASKET LOAD CAPACITY..... 50 LBS. DRYWEIGHT
 (For a Maximum Moisture Retention of 100%)

Electrical	440/60/3 Line Voltage w/110/60/1 Control Voltage
Total Current	54 Amps per phase
Basket Motor	1/2 H.P.
Fan Motor	1/2 H.P.
Floor Space	78" High x 39" Wide x 52" Deep
Exhaust Duct	8" Diameter
Rated Air Displacement	750 CFM at .2" Water Static Pressure

L36TD30MS**STEAM HEATED - NINE SECTION**

Recommended Operating Range	630-730 C.F.M. (17.84 - 20.67 M ³ /Minute)
Steam Supply Connection	3/4" (1.91 cm)
Steam Return Connection	3/4" (1.91 cm)
Operating Steam Pressure	7 - 15 PSIG (3.18 - 6.8 KG) low pressure 125 PSIG (45.36 KG) Max. high pressure
Drying Time (approximate)	25 lbs. (11.34 KG) dryweight (Indian Head) 80% moisture retention - 30 minutes low pressure, 22 minutes high pressure
Steam Consumption	2.7 B.H.P. - 90 lbs. (40.7 KG) / Hour with normal load - Low pressure
.....	3.4 B.H.P. - 117.3 lbs. (53.21 KG) / Hour with normal load - High pressure

BREAK DOWN PROCEDURE

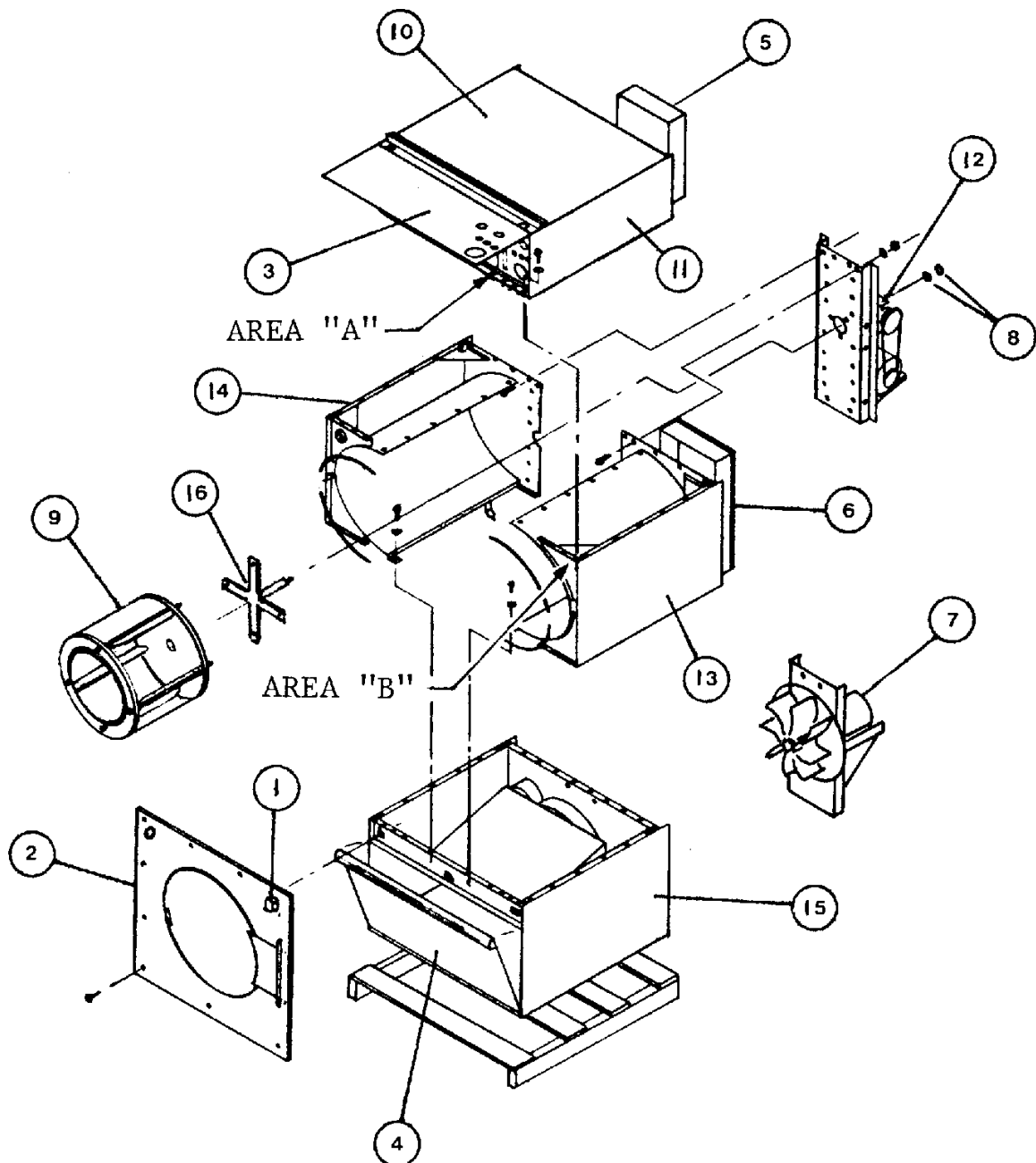
If the tumbler dryer is installed aboard ship, disconnect the electrical power leads and steam connections going to the dryer before proceeding further.

NOTE: All wiring is to be left in place unless otherwise noted. Thermometer and thermostat assembly is left in place.

Back channel, gear reducer, belt guard and motor assembly remains as one complete assembly.

1. Disconnect door switch (1) by pulling two brown wire connections at Area (B) after pulling the front door panel off (2). Disconnect the two wire leads from the white plugs and push them thru opening in Area (B).
2. Remove front panel (2) by unscrewing 11 Phillips head bolts holding it to the dryer. Two door switch wire leads go with front panel.
3. Remove lint door (4) by turning lock with a screwdriver.
4. Remove cover on reversing control box (6) by unscrewing 2 - hex head bolts. Pull apart three black leads on top of this control box coming from main disconnect (5). Disconnect the three red motor leads and three blue motor leads and two white plugs of wires coming from Area (A). Disconnect the Greenfield cable nuts from both motor cables and remove from control box. Disconnect the white Molex connectors and leave in place. Disconnect motor ground cables (green).
5. Unscrew 4 nuts holding fan motor fan and mount assembly (7) onto back of dryer.
6. Remove two basket shaft nuts (8) on gear reducer. Then go to front of dryer and wiggle the basket (9) from the dryer. The basket shaft key, 9 inches long, might stay with shaft; if it doesn't, remove it from gear reducer and tie it to the shaft for later use.

- (continued next page)



BREAK DOWN PROCEDURE (Continued)

9. Go to the rear of dryer and unscrew fourteen 3/8" nuts holding rear channel, motor and gear reducer assembly (12) to the dryer.
10. You can remove either the right section (13) or left section (14) next. Going to front of dryer, unscrew sixteen 1/4" hex head bolts holding either section to the base. The bolts are located behind the sweep sheets and both in front and rear of the compartment.
11. Unbolt the bottom section (15) from deck (six 5/8" bolts) or skid (1/4" lag bolts), whichever it may be.
12. If the Basket (9) must be taken apart to go through the passage ways, first turn basket on end so shaft is pointing skyward. Notice the markings on Basket rear and spider I & II, in red. These have to be re-attached at their same location when you re-assemble including any shims that may be present under each spider arm (this will keep the basket balanced). Remove 4 nuts from through bolts holding spider (16) to basket (9). Count shims under each spider arm and retain. Turn basket on its side and drill out 27 rivets on front and 27 rivets on the rear of the basket with the drill bit provided in kit. These rivets are completely around the circumference of the basket. Leave the ribs attached. Additional stainless steel and rivet gun are supplied with the dryer kit. Push both ends out of the basket material and save the ends. Now gently push sides of basket material in an oblong shape to pass through your door opening, do not crimp basket material.

To assemble, just proceed in the reverse order.

NOTE: After rewiring fan motor, check fan rotation. See label on fan motor housing for correct direction. To change rotation, reverse two of the three motor wires.

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GENERAL INSTALLATIONS

The construction of Cissell Cabinet Dryers permits installation side by side to save space or to provide a wall arrangement. Position dryer for the least amount of exhaust piping and elbows, and allow free access to the rear of dryer for future servicing of belts, pulleys, and motor.

Before operating dryer, open basket door, remove blocking between front panel and basket; remove all tape used to secure dryer parts during shipment; level dryer; and read all instruction tags, etc.

DRYER AIR FLOW INSTALLATION

Nothing is more important than air flow for the proper operation of a clothes dryer. A dryer is a pump which draws make-up air from the out-of-doors, through the heater, through the clothes and then forces the air through the exhaust duct back to the out-of-doors. Just as in a fluid water pump, there must be a fluid air flow to the inlet of the dryer if there is to be the proper fluid air flow out of the exhaust duct. In summary, there must be the proper size out-of-doors inlet air opening (4 to 6 times the combined areas of the air outlet) and an exhaust duct size and length which allows flow through the dryer with no more than 0.3 inches water column static pressure in the exhaust duct.

CISSELL WILL PROVIDE FREE ENGINEERING ADVICE FOR ANY SPECIFIED INSTALLATION

In some instances, a ventilation system with special fans are required to supply make-up air and/or boost exhaust fans.

EXHAUSTING DUCT

If needed, use adapter to increase 8" dia. duct to 12" dia. duct. Vent the 8" dia. exhaust, on rear of dryer, to atmosphere. Do not reduce duct size. If vent is vertical through roof, install two elbows on the discharge end forming a "U" looking down; if vent is horizontal through wall, install one elbow on the discharge end looking down to prevent wind, rain, snow, sleet, etc., from entering duct and flowing down to dryer.

For multiple dryer installations, it is preferable to vent each dryer individually with a separate duct.

When conditions require the use of a single exhaust duct for several dryers, piping from each dryer should enter the single duct at an angle of approximately 30°-45°, and in the direction of the air flow. The cross sectional area of the single exhaust duct should equal the combined areas of the dryer ducts connected to it. Make all exhaust connections with the least amount of elbows to reduce air resistance to a minimum. Provide cleanout and inspection openings in the horizontal sections of the duct work and clean periodically. On multiple installations employing a single exhaust duct, there should be no back draft to interfere with the normal free discharge of air from each dryer.

Before approving duct installation, place each dryer in operation; progressively open each dryer door, manually trip door switch, and see that air is drawn into the basket door opening as freely as it is when all other dryers are stopped.

Keep the exhaust ducts clean. Do not install wire mesh or screen in the exhaust ducts as lint will build up and prevent discharge of air from dryers. Keep inside surfaces smooth. Pop rivets are recommended for duct assembly.

MAKE-UP AIR

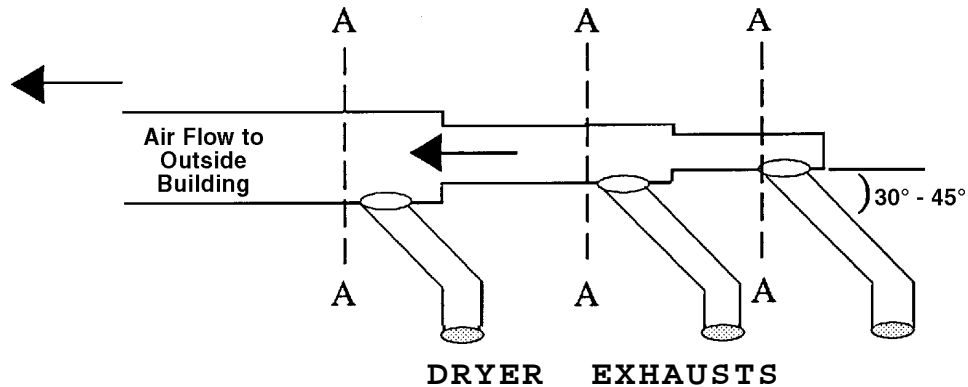
If possible, provide opening to the room where the dryer is a minimum of 2 square feet make-up air for each dryer.

TROUBLESHOOTING

Scorched clothes, slow drying, lint accumulations, or air switch malfunction are indicators of exhaust and/or make-up air problems.

EXHAUST DUCT INFORMATION

For Exhaust Duct less than 14 feet and 2 elbows equivalent and less than 0.3 inches static pressure.



Area of section "A-A" must be equal to the sum of dryer exhaust pipes entering multiple exhaust pipe. (See chart below.)

MODELS: L28FD30, L28US30, L36FD30, L36UR30, L36CD36, L44FD42

No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Duct Diameter (inches)	6	9	11	12	14	15	16	17	18	19	20	21	22	23	23	24	25	26	26	27	28	28	29	30
(in CM)	15	23	27	30	35	38	41	43	46	48	51	53	56	58	58	61	63	66	66	68	71	71	73	76

MODELS: L28CD30, L28UR30, L36CD30, L36UR30, L36CD36, L44FD42

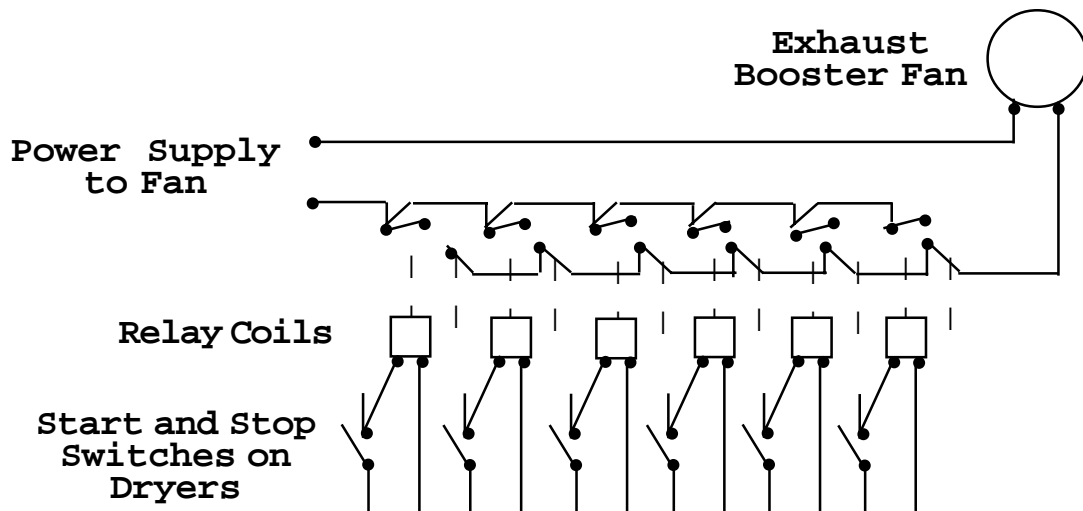
No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Duct Diameter (inches)	8	12	14	16	18	20	22	23	24	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
(in CM)	20	30	35	41	46	51	56	58	61	66	68	71	73	76	78	81	84	86	89	91	94	97	99	100

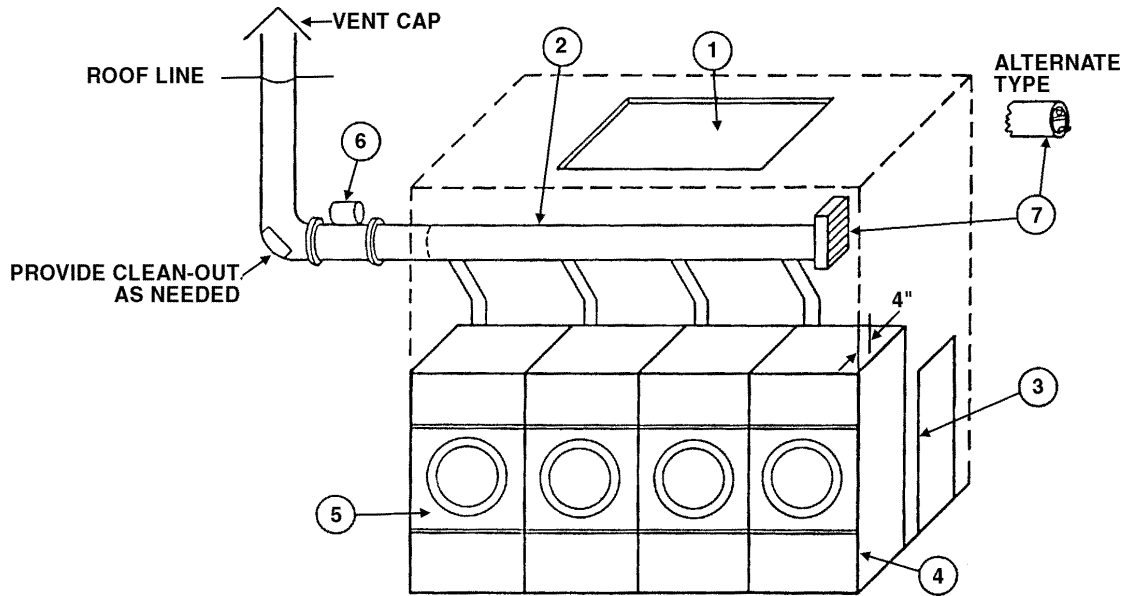
MODELS: L44CD42, L50CD42

No. of Dryers	1	2	3	4	5	6	7	8	9	10	11	12
Duct Diameter (inches)	12	17	21	24	27	30	32	34	36	38	40	42
(in CM)	30	43	53	61	68	76	81	86	91	97	100	106

AUTOMATIC ELECTRICAL CONTROL FOR EXHAUST FAN

For one or more dryers to start fan.



DRYER INSTALLATION WITH MULTIPLE EXHAUST

For Exhaust Duct more than 14 feet and 2 elbows equivalent and more than 0.3 inches static pressure.

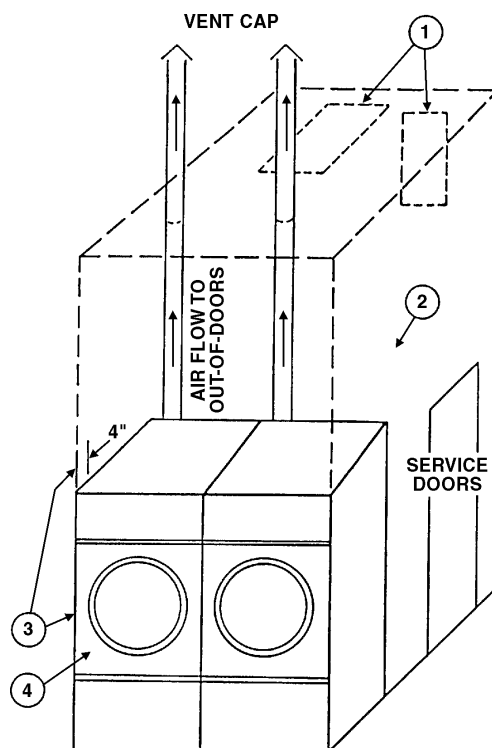
(See illustration on next page.)

1. Make-up air from outside building may enter enclosure from top or side walls. Area of opening should be equal to 4 to 6 times the sum of dryer duct areas. Provide 1 square foot ($.1\text{m}^2$) for each 6 inches (15.24 cm) diameter; 2 square feet ($.2\text{m}^2$) for each 8 inches (20.3 cm) diameter; and 4 square feet ($.4\text{m}^2$) for each 12 inches (30.5 cm) diameter.
2. Use constant diameter duct with area equal to the sum of dryer duct areas.
EXAMPLE: 6-8 inches (20 cm) diameter duct = 1-19.6 inches (49.8 cm) diameter duct in area. Use 20 inches (50 cm) diameter duct or diameter to match tube-axial fan.
3. Enclosure (plenum) with service door. This separates the dryer air from room comfort air. If dryers use room air instead of outside air, the heat loss can be another 25 BTU/HR (6.3 kcal/hr) for each cubic foot per minute (CFM) used.
4. Zero inches clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
5. Heat loss into laundry room from dryer fronts *only* is about 60 BTU/HR per square foot (15 kcal/hr per 0.1m^2).
6. Flange mounted, belt driven tube-axial fan. **Fan must run when one or more dryers are running.** See *suggested Automatic Electrical Control Wiring Diagram* on previous page. Must meet local electrical codes. Fan air flow (CFM) ($\text{M}^3/\text{min.}$) is equal to sum of dryer air flows, but static pressure (SP) is dependent on length of pipe and number of elbows.
7. **Barometric Bypass Damper**—Adjust to *closed flutter position* with all dryers and exhaust fan running. **Must be located within enclosure.**

CAUTION: Never install hot water heaters or other gas appliances in the same room as dryers. Never install cooling exhaust fans in the same room as dryers.

CAUTION: Never exhaust dryers with other types of equipment.

DRYER INSTALLATION WITH SEPARATE EXHAUST **(PREFERRED)**



For ductwork less than 14 feet and 2 elbows equivalent and less than 0.3 inches static pressure:

NEVER exhaust the dryer into a chimney.

NEVER install wire mesh screen over the exhaust or make-up air area.

NEVER exhaust into a wall, ceiling, or concealed space.

1. Make-Up Air opening from outside the building may enter the enclosure from the top or side walls. The area of the opening should be equal to 4 to 6 times the sum of the dryer duct areas. Provide 1 square foot ($.1\text{m}^2$) for each 6 inches (15.24 cm) diameter; 2 square feet ($.2\text{m}^2$) for each 8 inches (20.3 cm) diameter; and 4 square feet ($.4\text{m}^2$) for each 12 inches (30.5 cm) diameter.
2. Enclosure (plenum) with service door. This separates the dryer air from the room comfort air. If dryers use room air instead of outside air, additional heat loss can be another 25 BTU/HR (6.3 kcal/hr) for each cubic foot per minute (CFM) ($.03\text{m}^3/\text{min.}$) used.
3. Zero inches (mm) clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
4. Heat loss into laundry room from dryer front panels is about 60 BTU/HR per square foot (15 kcal/hr per 0.1m^2).

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DRYER AIR FLOW INSTALLATION

Nothing is more important than air flow for the proper operation of a clothes dryer. A dryer is a pump which draws make-up air from the out-of-doors, through the heater, through the clothes and then forces the air through the exhaust duct back to the out-of-doors. Just as in a fluid water pump, there must be a fluid air flow to the inlet of the dryer, if there is to be the proper fluid air flow out of the exhaust duct.

In summary, there must be the proper size out-of-doors inlet air opening (4-6 times the combined areas of the air outlet) and an exhaust duct, size and length of which allows flow through the dryer with no more than 0.3 inches water column static pressure in the exhaust duct.

In some instances, special fans are required to supply make-up air, and/or boost exhaust fans are required for both regular and energy saving models.

FOR BEST DRYING:

1. Exhaust duct maximum length 14 feet of straight duct and maximum of two 90° bends.
2. Use 45° and 30° elbows wherever possible.
3. **Exhaust each dryer separately.**
4. **Do not** install wire mesh or other restrictions in the exhaust duct.
5. Use clean-outs in the exhaust duct and clean periodically when needed.
6. **Never** exceed 0.3 inches water column static pressure in the exhaust duct.
7. Inside surface of the duct **must be smooth.**
8. Recommend pop rivets for duct assembly.

FOR BEST DRYING:

1. Provide opening to the out-of-doors in accordance with the following:
For each dryer -
8 inches diameter exhaust requires 2 square feet make-up air.
12 inches diameter exhaust requires 4 square feet make-up air.
2. Use barometric shutters in the inlet air opening to control air when dryers are not running.

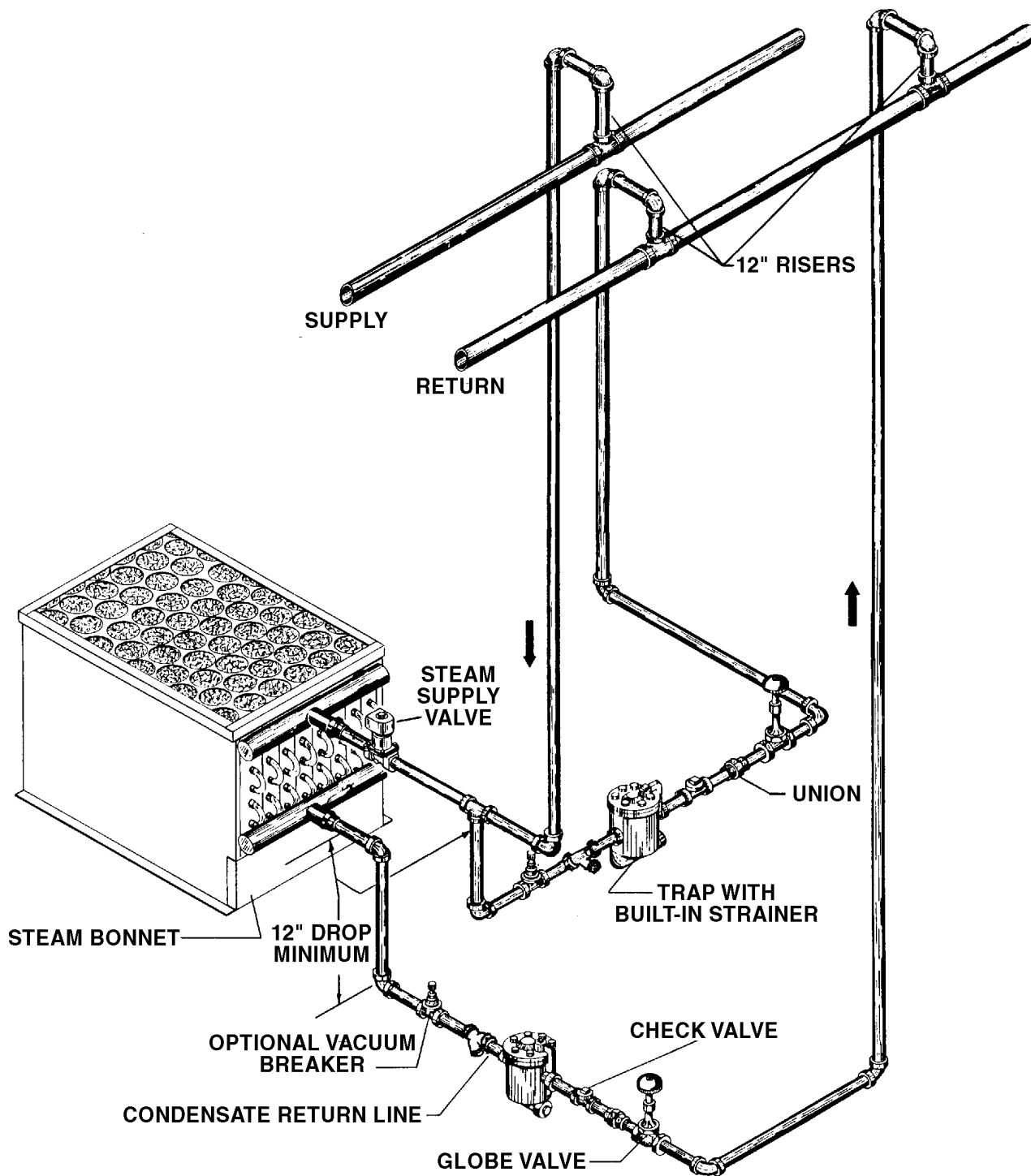
OTHER RECOMMENDATIONS

To assure compliance, consult local building code requirements.

TROUBLESHOOTING

Hot dryer surfaces, scorched clothes, slow drying, lint accumulations, or air switch malfunction are indicators of exhaust duct and/or make-up air problems.

RECOMMENDED STEAM PIPING
INSTALLATION ILLUSTRATION



S6162-BS-MMC-010/12489
OPERATING INSTRUCTIONS

- Step 1. After loading the dryer tumbler with the washed clothes load, proceed to close the loading door.
- Step 2. Timer Models - Turn drying timer knob to the desired drying time.
- Step 3. Temperature Selector - Select temperature per type of load being dried in the dryer.
High Heat - mixed and heavy fabrics - 180° F exhaust temperature.
Low Heat - polyknit synthetic-blends-light weight fabrics - 160° F exhaust temperature.
- Step 4. Turn ON/OFF switch to "ON" position.
- Step 5. Push the Push-to-Start button. The "Drying" light will be "On".
Note: After the dryer has worked for your "set" amount of time, the machine will go into the automatic cool-down setting (the "Cool-Down" light will be "On"). The machine will operate automatically until the exhaust temperature reaches 135° F.
At this point the machine will stop and a "buzzer" will be turned "On".
- Step 6. Turn "ON/OFF" switch to "OFF". At this point, the buzzer will stop.

GENERAL MAINTENANCE

1. CLEAN LINT TRAP DAILY: Remove lint daily before starting operation. A clean lint trap will increase the efficiency of the dryer, as the moisture laden air will be exhausted to the atmosphere more quickly.
2. KEEP BASKET AND SWEEP SHEETS CLEAN: Check periodically and clean as often as required. The basket and sweep sheets within the dryer are easily accessible for cleaning by removing the front panel of the dryer. Take screws out of front panel, then lift panel off.
3. PULLEYS (SHEAVE) AND BELT: Keep belts clean. Oil and dirt will shorten the useful life of a belt. Never allow a belt to run against the belt guard. Check belts periodically for alignment. Pulley shafts must be parallel and the grooves must be in alignment. To align pulley, loosen set screw and slide pulley in or out to align up with the other pulley. Tighten set screw securely.
4. ELECTRIC MOTORS: Keep motors clean and dry. Occasionally blow dust out of winding. After 3 years normal or 1 year heavy duty service all oil. No reoiling normally required for light duty with total operating time under 25,000 hours. Use electrical motor or S.A.E. 10 oil. DO NOT OVER OIL.
5. GEAR REDUCER: Maintain oil level in gear reducer 1/2 depth of oil cup. Transmission oil to meet military specification MIL-L-6086B.

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Motor will not start.	Motor overloads open.	Reset Overload Relay.
	Defective Bonnet Hi-H Limit.	Replace thermostat (Elec. models only)
	No power.	Check fuses on Circuit Breakers. Make sure Main Control Switch is <u>on</u> . Check control fuse.
	Incorrect power.	Check power source; voltage, phase and frequency must be the same as specified on Electrical Rating Plate.
	Defective Start Switch.	Replace Switch.
	Time off.	Turn timer clockwise to desired time setting.
	Loose wiring connections.	Check wire connections in electrical box on rear of dryer.
	Defective starting relay.	Check coils and contacts. Replace Switch.
	Defective Door Switch.	
Motor tripping on thermal overload.	Low voltage.	Check voltage at motor terminals. Voltage must be within (plus or minus) 10% of voltage shown on motor rating plate -- if not, check with local power company for recommended corrective measures.
	Inadequate wiring.	Check with incoming power to ensure that wiring is adequately sized for load.
	Loose connections.	Check all electrical connections and tighten any loose connections.
	Inadequate air.	Check Installation Sheet in Service Manual for recommended make-up air openings.
	Poor housekeeping.	Clean lint accumulation on and around motors.
Basket motor will not run.	Defective Basket Motor Contractor.	Replace contactor.
	Defective Reversing Timer.	Replace timer.
	Defective motor.	Replace motor.

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Dryer runs , no steam to coils.	Solenoid valve.	On dryers using solenoid temperature control , check operation of solenoid valve by advancing thermostat.
	Thermostat .	On dryers using solenoid temperature control , thermostat controls operation of solenoid valve. If defective, replace thermostat.
	Check valve installed incorrectly.	Check for inlet and outlet marking on check valve, and invert if necessary.
	Strainer clogged.	Remove plug and blow down strainer or remove and clean thoroughly if heavily clogged.
Water in steam line.	Steampiping installed incorrectly.	Check piping per steam installation instructions.
	Trap not functioning.	Check trap for size and capacity. If dirty and sluggish, clean thoroughly or replace. Check return line for high back pressure, or another trap charging against the trap functioning improperly.
Dryer runs no steam to coils.	Valve closed.	Check all valves in steam supply and return - make sure they are open.
	Steam trap blocked.	Remove and clean. Replace if defective.
Dryer too hot .	Inadequate make-up air.	Make-up air must be 4 to 6 times the exhaust area of the dryer.
	Lint accumulated.	Remove lint.
	Exhaust duct dampers.	Must be full open or replace.
	Defective Hi-Lo Switch.	Replace switch.
	Partially restricted or inadequately sized exhaust system.	Check installation sheet in service manual for recommended sizes. Check for and remove obstructions or lint build up from duct work. Never use small size exhaust duct. Always use larger size exhaust duct.
	Defective thermostat.	Replace thermostat.
Garments too hot at end of cycle.	Defective Therm-O-Cool Thermostat.	Replace Thermostat
	Defective Therm-O-Cool relay.	Replace relay.

Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Basket motor runs , but basket will not revolve.	V-Belt broken.	Replace V-Belt.
	V-Belt loose.	Adjust belt tension.
	Motor pulley loose.	Tighten set screw.
Dryer does not stop at end of cycle.	Defective timer.	Replace timer
	Defective Therm-O-Cool thermostat.	Replace thermostat.
Basket does not reverse.	Reversing timer.	Check timer to see if operating.
	Reversing timer.	Adjust timer (See Furnas control sheet).
Dryer noisy or vibrating.	Not leveled.	Check manual for proper leveling procedures.
	Fan out of balance.	Accidental damage to the fan blade can change the dynamic balance. Damaged fans should be replaced.
	Basket rubbing.	Adjust basket clearance.
	V-Belt sheaves.	Tighten set screws , make sure sheaves are in proper alignment.
	Belt.	Adjust belt tension.
	Foreign objects.	Occasionally screws, nails, etc. will hand in the basket perforations and drag against the sweep sheets surrounding the basket. Such foreign objects should be removed immediately.
Blower motor will not run (Basket Revolves).	Defective blower contactor.	Replace contactor.
	Defective motor.	Replace motor.
Dryer does not stop at end of time period.	Defective timer.	Replace timer.

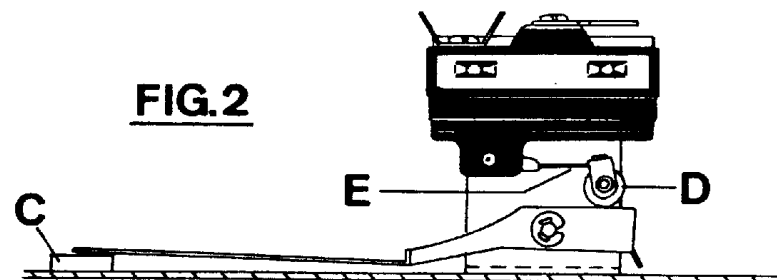
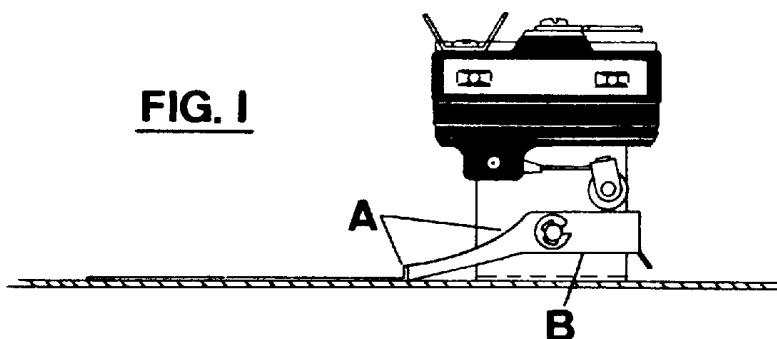
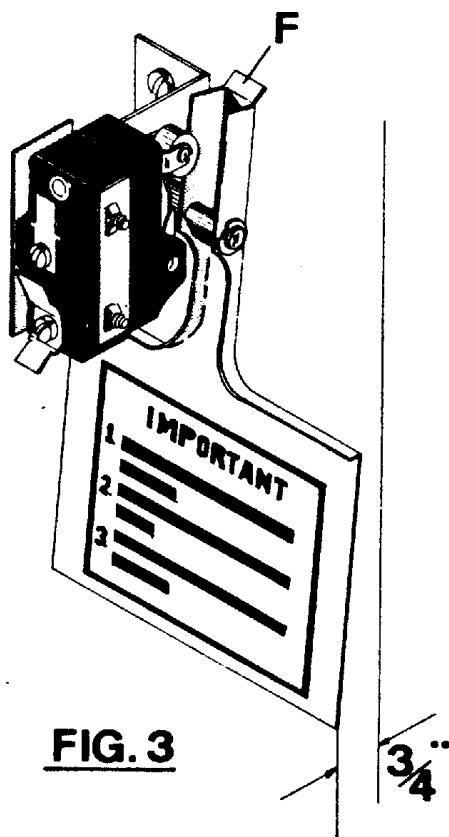
Troubleshooting Chart

TROUBLE	CAUSE	REMEDY
Dryer runs , but no heat .	Incorrect voltage.	Check for correct control voltage - 120V.
	No voltage.	Check power supply, check secondary voltage on transformer and check wiring and wiring diagram.
	Lint door open.	Close lint door.
	Air switch not operating (elec. only)	Clean out lint compartment daily. Check back draft damper for foreign object lint accumulation or other causes that may prevent damper from opening. Check duct work for lint build-up. Check installation sheet to ensure that duct work and make-up air openings are adequately sized. Check exhaust outlet. If a screen has been improperly installed on the outlet, it may be clogged with lint or frozen over in winter. Never install a screen on the exhaust outlet. Vacuum within dryer drops .09 inches of water column, or less, for normal operation of dryer, vacuum reading (in inches of water column) should range between .15 and .3 inches. Vacuum reading can be made with a vacuum U-gauge by removing a sheet metal screw in the front panel of dryer, and inserting the rubber tube of the vacuum gauge into screw opening.
	Air switch out of adjustment (elec. only).	See air switch adjustment sheet in service manual.
	Air switch defective (elec. only).	Replace air switch.
	Line fuse or heater circuit fuse blown to unit.	Replace fuse.
	Replace electric contactor.	Replace contactor.
	Replace electric elements.	Replace elements.
	Defective thermostat.	Replace thermostat.
	Defective safety overload thermostat.	Replace thermostat.
	Defective timer.	Replace timer.

S6162-BS-MMC-010/12489
AIR SWITCH ADJUSTMENT

ELECTRIC ONLY

1. Shut off current; disconnect leads and remove air switch.
2. Lay air switch assembly on flat surface. Adjust air blade at "A" (Fig. 1) so that air blade lays flat and surface "B" is parallel to the flat surface.
3. Place $\frac{3}{8}$ " x $\frac{5}{8}$ " spacer bar or equivalent "C" (Fig. 2) under air blade in position shown; hold switch mounting bracket firmly and adjust switch actuator "D" with needle nose pliers at "E" by twisting actuator right or left whichever is needed so that switch closes when end of air blade engages bar "C".
4. Maximum opening or air switch must be no greater than $\frac{3}{4}$ " (Fig. 3). Bend tab "F" in or out to maintain this dimension.
5. Re-install air switch assembly on rear of dryer.
6. Re-check operation of air blade. Switch must close before air blade engages face or opening and re-open before stop "F" engages.



Small Gear Reducer Operation and Maintenance

BEFORE PLACING THE DRYER IN OPERATION, Remove small screw from vent tube in top rear of each Gear Reducer case. Remove the cork from the oil level inspection cup. If the oil level is correct, the oil level inspection cup will be half filled with oil. If not, add oil. Oil may be added to the Gear Reducer by removing the filler plug in the top rear of the Gear Reducer case. Do not operate a Gear Reducer unless the drain plug is tight, and the vent tube screw removed.

If it is necessary to return a Gear Reducer to the factory, either replace the small screw in the vent tube and plug the oil-level inspection cup with a cork, or drain all oil from the reducer by removing the drain plug located in the bottom rear of the Gear Reducer case.

EACH GEAR REDUCER is filled with 5 pints of Cissell TU3465 transmission oil before leaving the factory. Change oil once every 6 months.

THE LARGE TIMKEN BEARINGS, which support the worm gear and basket load, must operate in a preloaded condition, that is the worm gear must not have end play. The Gear Reducer is assembled at the factory to provide a 16-20 inch lb. pre-load on these bearings.

THE SMALL TIMKEN BEARINGS, which carry the worm must operate in a pre-loaded condition, that is, the worm must not have end play. The Gear Reducer is assembled at the factory to provide a 2-4 inch lb. pre-load on these bearings.

REMOVAL AND INSTALLATION OF GEAR REDUCER SEALS

NOTE: On original equipment, the Cissell Gear Reducer is equipped with a Garlock Shaft Seal. If this seal requires replacement, it cannot be replaced with the same type of seal since the original seal would have seated in on the shaft. It must be replaced with a TU2166.

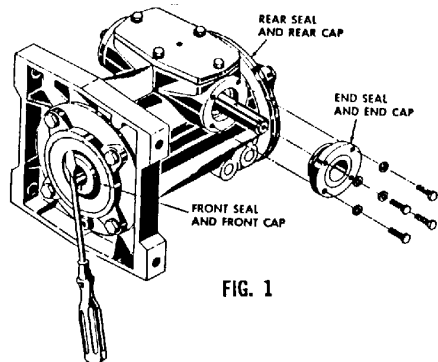


FIG. 1

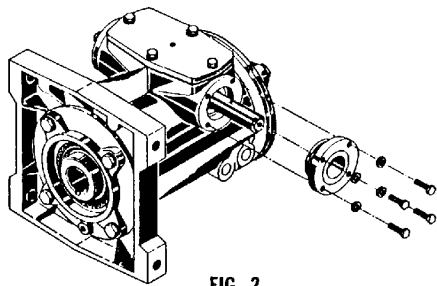


FIG. 2



FIG. 3

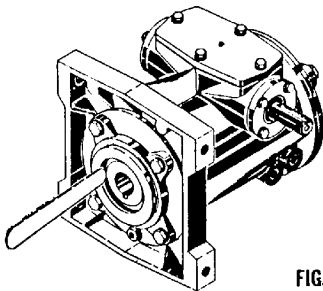


FIG. 4

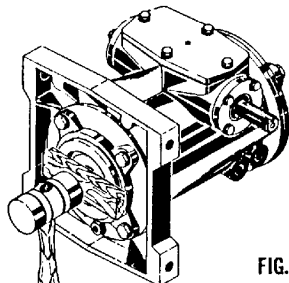


FIG. 5

CAUTION

Drain oil **before** removing seals; replace with **NEW** oil after installing new seals (See Cissell Gear Reducer Sheet).

Remove Gear Reducer from rear of dryer **before** removing seals.

TO REMOVE EXISTING FRONT AND REAR SEALS from front and rear caps on Gear Reducer (Fig. 1):

Slip end of screwdriver under seal (front seal illustrated); using end of Gear Shaft as a fulcrum, force seal out. Repeat operation at several different places until seals are removed from gear shaft.

TO REMOVE EXISTING END SEAL and END CAP from Gear Reducer (Fig. 1):

Remove four cap screws and slip end cap and seal from worm gear. Tap seal out of cap from inside.

Clean inside of front, rear, and end caps. Spread permatex evenly over area to receive seal. Clean outside end of large and small gear shafts. Spread vasoline evenly over area to receive seal, (Fig. 2). Spread permatex evenly over outside rim area, (Fig. 3) of seal. Spread vasoline evenly over inside rim area of seal.

TO INSTALL NEW FRONT AND REAR SEALS:

Hold front (and rear) seal tightly in place over gear shaft with rubber seal in. Run edge of thin, dull instrument (such as wooden spatula, illustrated against front seal, Fig. 4) carefully around rubber wiping edge of seal and chamfer end of gear shaft so that seal is evenly installed all around gear shaft. **DO NOT INJURE RUBBER WIPING EDGE.**

TO INSTALL NEW END SEAL:

Slip seal in end cap. Hold cap and seal tightly in place over small shaft with rubber seal in. Run edge of wooden spatula carefully around rubber wiping edge of end seal and chamfer end of small shaft so that seal is evenly installed all around edge of shaft. **DO NOT INJURE RUBBER WIPING EDGE.**

AFTER SEALS ARE EVENLY INSTALLED ALL AROUND EDGES OF SHAFTS:

Place block of wood over front and rear seals and tap all around with a plastic faced mallet, (Fig. 5) until seal is flush into recess of front (or rear) cap.

Slip end seal and cap into position and tighten four bolts; then with a block of wood over end seal, gently tap with plastic faced mallet, until seal is flush into recess of end cap.

REINSTALL GEAR REDUCER ON REAR OF DRYER

IMPORTANT

While the sealing element or packing ring in a seal is not fragile, care must be taken to prevent damage to the wiping edge during mounting. Do not apply pressure to, nor hammer directly on, the sealing ring or spring: make sure that all mounting tools contact only the metal case of the seal.

INSTRUCTIONS FOR DRYERS WITH REVERSING CONTROL**IMPORTANT**

Tumbler Basket must stop completely for 3 to 5 seconds between reversals.

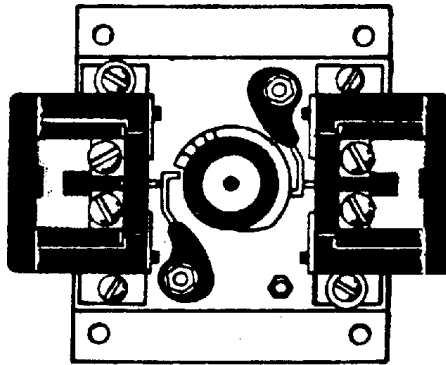
In operation, coasting of basket increases, making it necessary to readjust Reversing Timer.

Failure to do this will cause the thermal overload units for the basket to cut-out unnecessarily and probably damage gear reducer.

FURNAS TIMER NO. L3788

3.2 reversals per minute

Minimum OFF adjustment 1.1 seconds. Each division adds 1.2 seconds.

**TO ADJUST**

Open main power switch before working on electrical controls. Rotate upper cam clockwise to increase STOP time between reversals; counter-clockwise to decrease.

Lower cam has 10 division. Normal adjustment, 4 divisions, as shown.

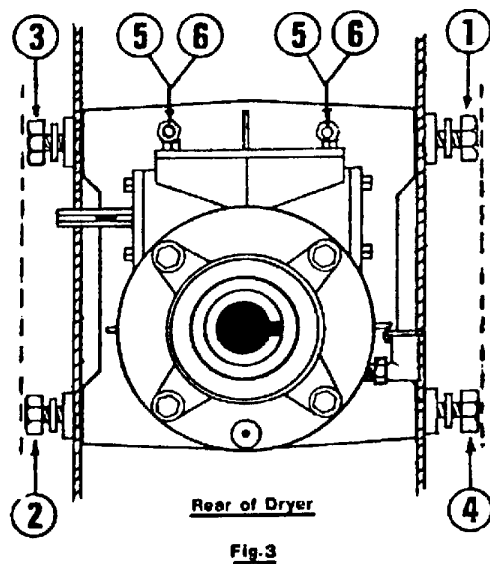
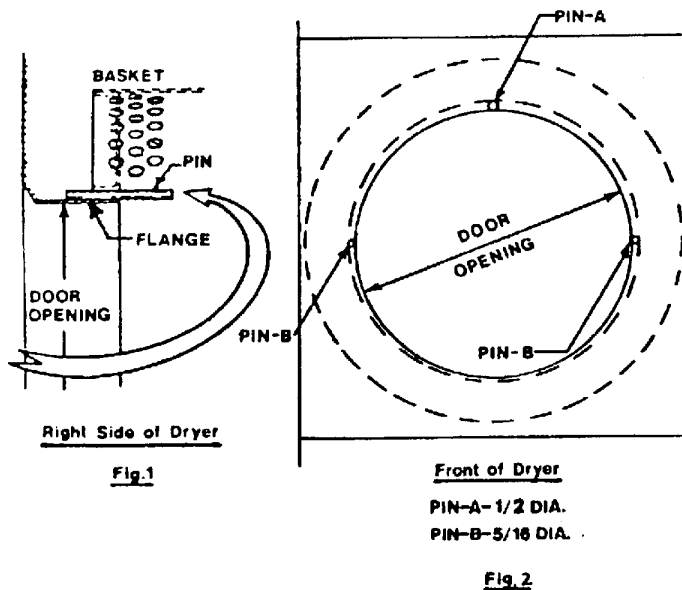
FAN ROTATION

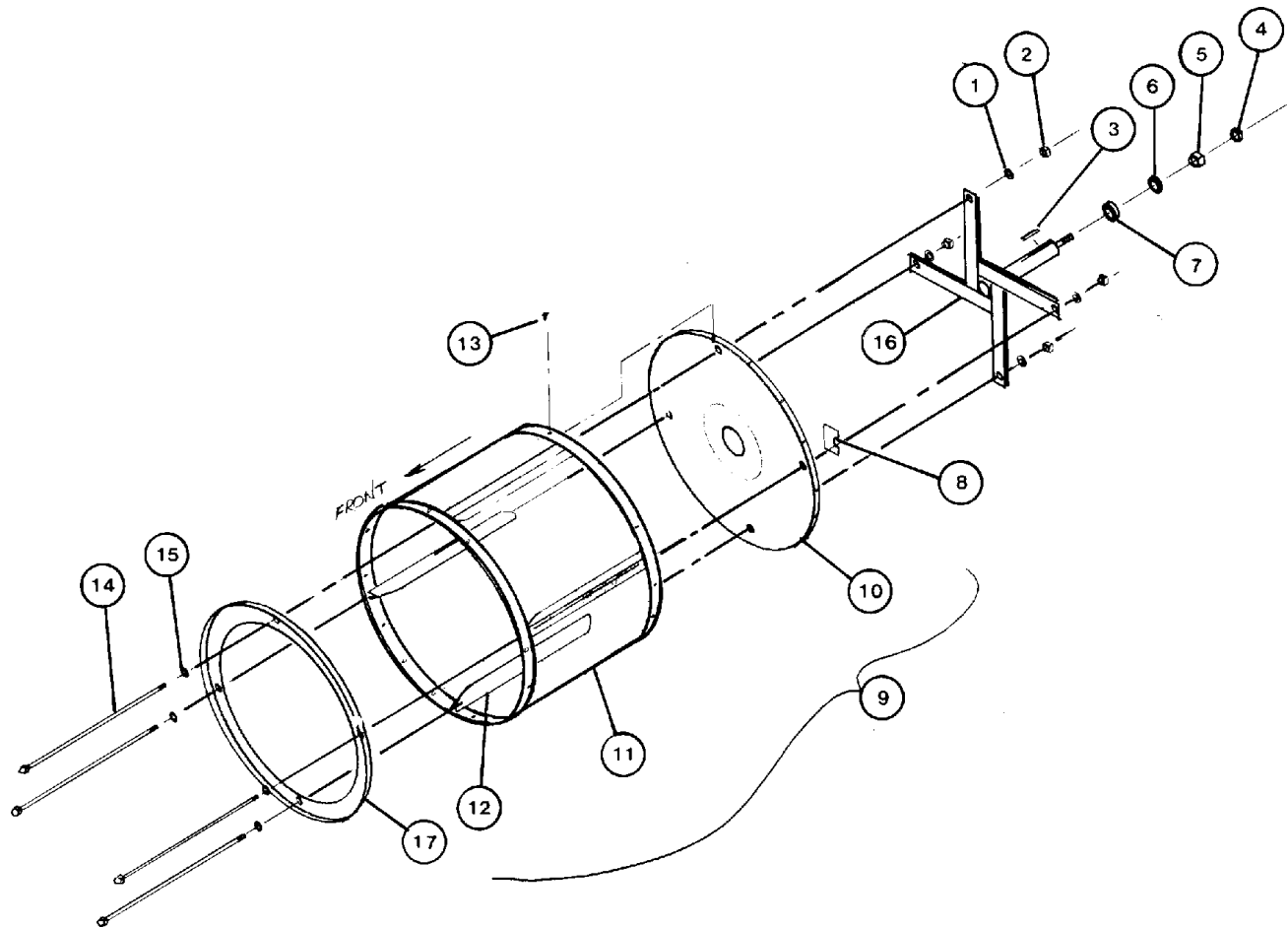
NOTE: Fan rotates counter-clockwise as viewed from back end of motor. See arrow on motor support. To change rotation, reverse power leads L1 and L2.

INSTRUCTIONS FOR ALIGNING BASKET ON CISSELL 50 LB. DRYER - DOUBLE MOTOR

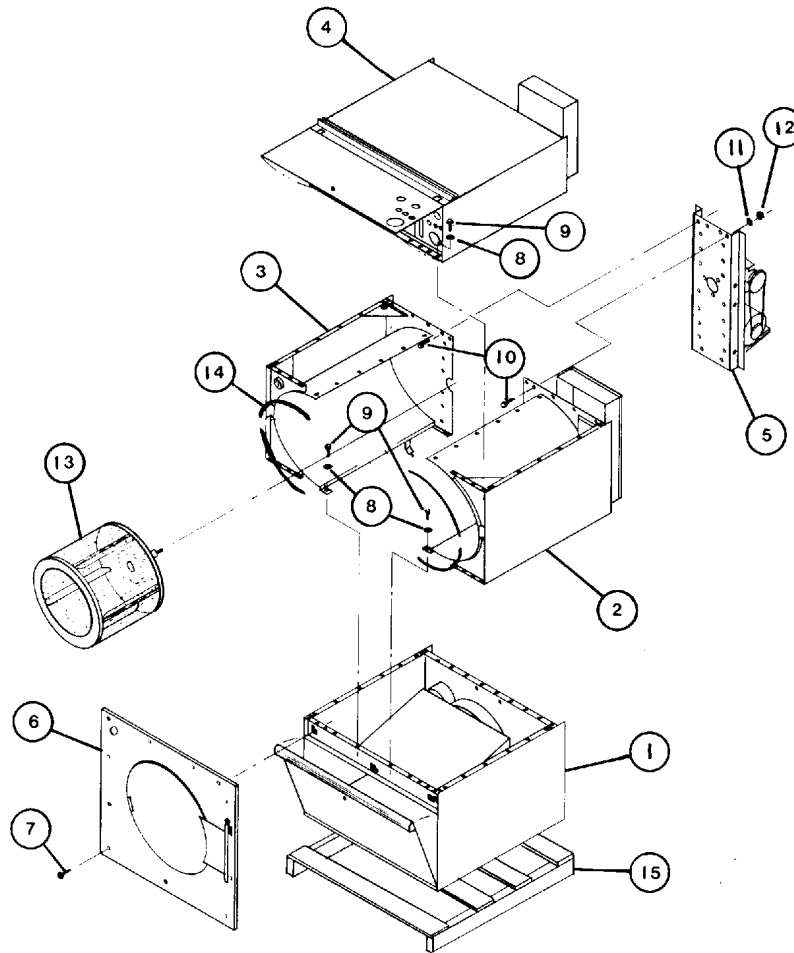
1. Loosen the 4 gear reducer mounting bolts (1, 2, 3 & 4) on rear of dryer, and 2 adjusting bolts #5, on gear reducer housing (Fig. 3).
2. Place one "A" and two "B" diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in Figure 1 and Figure 2. Check the two "B" pins for equal clearance.
3. With the pins in position, tighten the two No. 5 bolts until flush against back of dryer. Retighten gear reducer mounting bolts in the numerical order indicated in Figure 3. Tighten lock nuts No. 6 to secure bolts No. 5 in position. Then remove pins.
4. Check the space between basket and door opening at "A" pin and "B" pin positions (Figure 2). If the gap is not approximately the same on both sides, repeat steps 1, 2 & 3.

NOTE: Use short sections of round steel rod for pins or drill bits may be used in place of round rod.

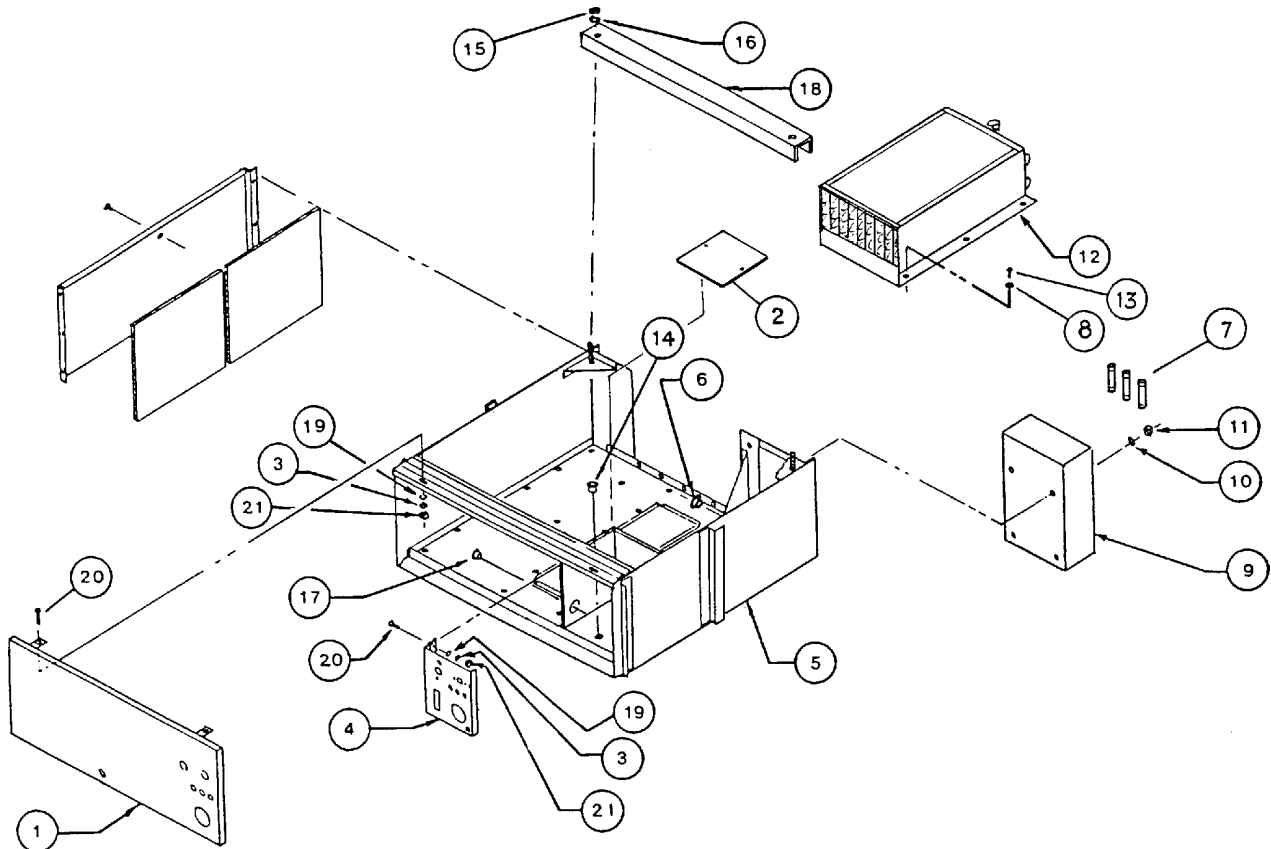


BASKET AND SPIDER ASSEMBLY - TU10460

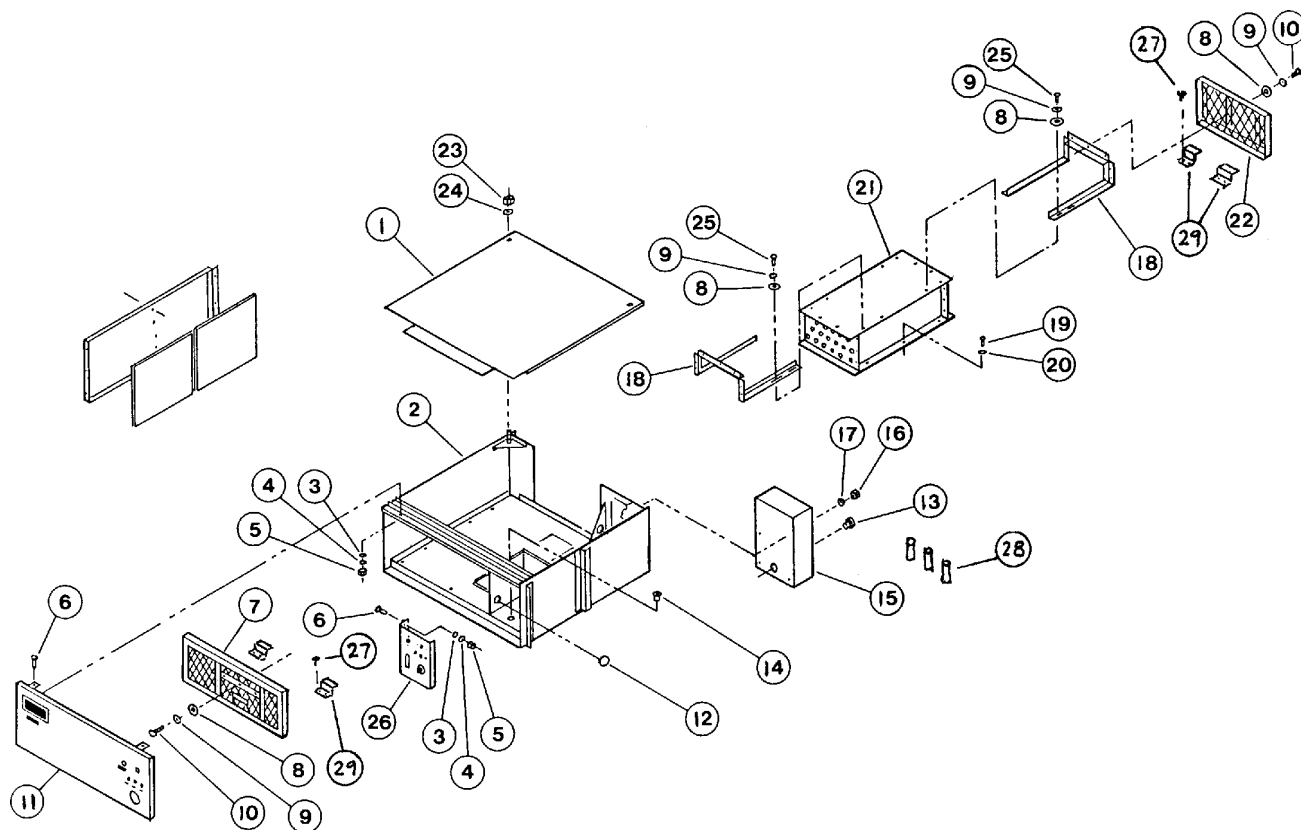
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU2831	1/2" Heavy Lockwasher	4
2	TU2882	1/2" - 20 x 3/4" Hex Nut	4
3	TU5887	Key	1
4	TU3536	#1 - 14 x 1-1/2" F Hex Jam Nut	1
5	TU3537	#1 - 14 x 1-1/2" F Hex Nut	1
6	TU2493	2 - 1/8 x 1 Washer	1
7	TU108	Felt Gasket	1
8	TU5490	Shim	As Req'd.
9	TU10459	Basket Sub-Assembly	1
10	TU200	Rear Head	1
11	TU10458	Basket	1
12	TU2082	Rib	4
13	SC633	1/8" Pop Rivet	56
14	TU2313	1/2" - 20 x 31-3/16 Hex Head Bolt	4
15	TU2883	1/2" Cut Washer	5
16	TU5231	Spider	1
17	TU5480	Front Head	1

OVERALL ASSEMBLIES

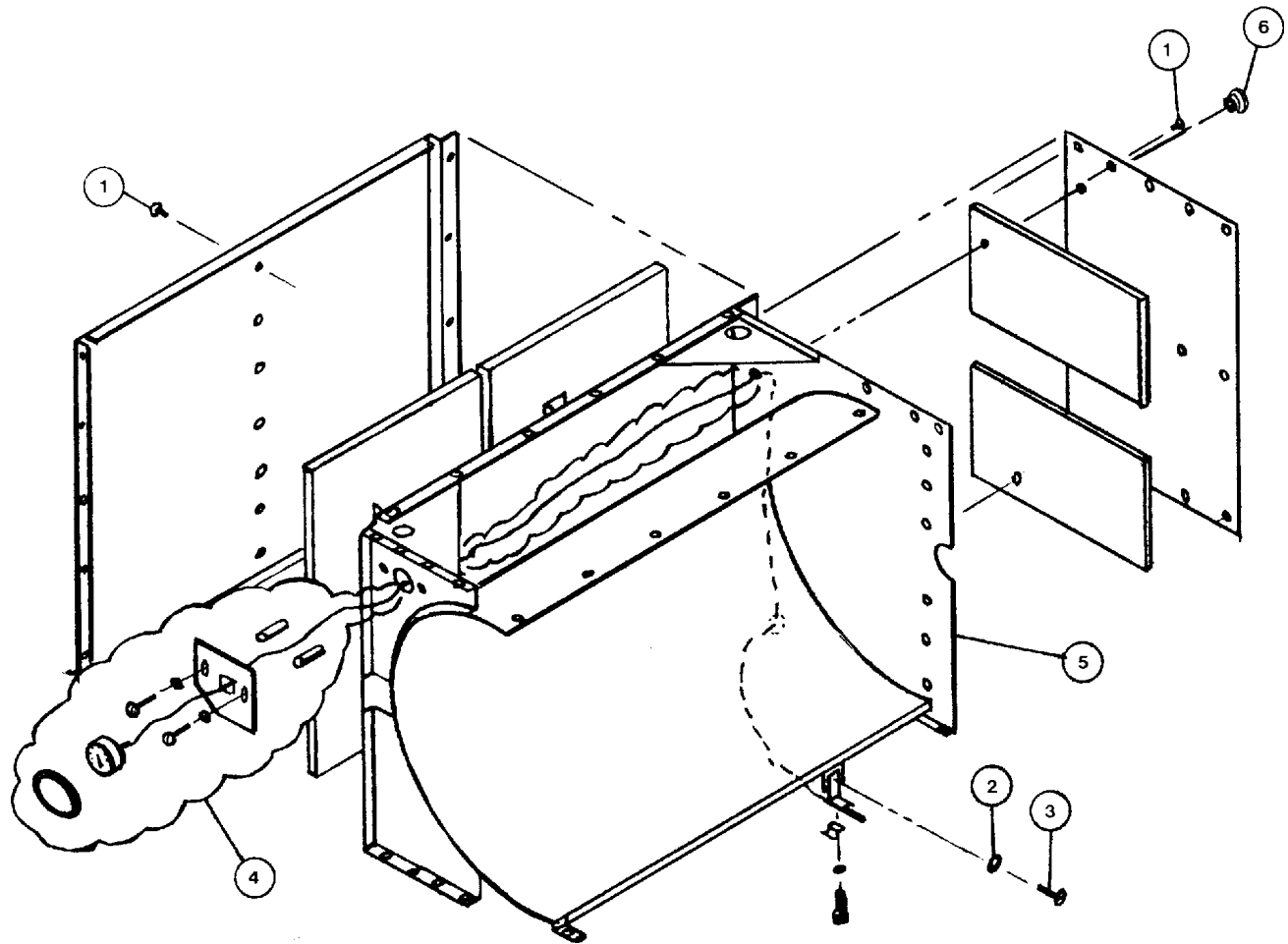
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU11717	Bottom Bolted Section	1
2	TU11718	Right Center Bolted Section "Electric"	1
	TU11818	Right Center Bolted Section "Steam"	1
3	TU11719	Left Center Bolted Section	1
4	TU11720	Top Bolted Section, Electric	1
	TU11721	Top Bolted Section, Steam	1
5	TU10600	Back Channel Bolted Section	1
6	TU11766	Front Panel & Door Assembly, Right Hand	1
	TU11772	Front Panel & Door Assembly, Left Hand	1
7	TU6708	1/4" - 20 x 1-1/2" Truss Head Screw	12
8	TU2846	1/4" Lockwasher	64
9	SV80	1/4" - 20 x 3/8" Hex Head Screw	64
10	TU3124	3/8" - 16 x 3/4" Hex Head Screw	4
11	VSB134	3/8" Lockwasher	20
12	TU4787	3/8" - 16 Hex Nut	20
13	TU10460	Basket & Spider Assembly	1
14	TU5876	Sweep Sheet Gasket Set	1
15	TU5226	Skid	1

OVERALL ASSEMBLIES

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10481	Access Door Assembly	1
2	TU10651	Mechanism Box Cover	1
3	FB187	#10 Lockwasher	4
4	TU10580	Mechanism Box Door Assembly	1
5	TU10577	Top Jacket Weldment	1
6	TU2372	7/8" Heyco Bushing	2
7	TU819905	Fuse, 5 Amp, 600 Volt	3
8	VSB134	Lockwasher	6
9	TU11207	Disconnect Box, 30 Amp	1
10	TU2846	1/4" Lockwasher	10
11	TU4934	1/4" - 20 Hex Nut	4
12	TU11202	Steam Bonnet Complete	1
13	TU3124	3/8" - 16 x 3/4" Hex Bolt	6
14	TU10193	3/8" Heyco Bushing	1
15	C249	5/16" - 18 Hex Nut	2
16	TU2814	5/16" Lockwasher	2
17	TU5866	1-1/4" Plug Button	1
18	TU11208	Top Rear Brace	1
19	P104	1/4" Cut Washer	4
20	TU3479	#10 - 32 x 7/32" Truss Hd. Screw	4
21	TU2842	#10 - 32 Hex Nut	4

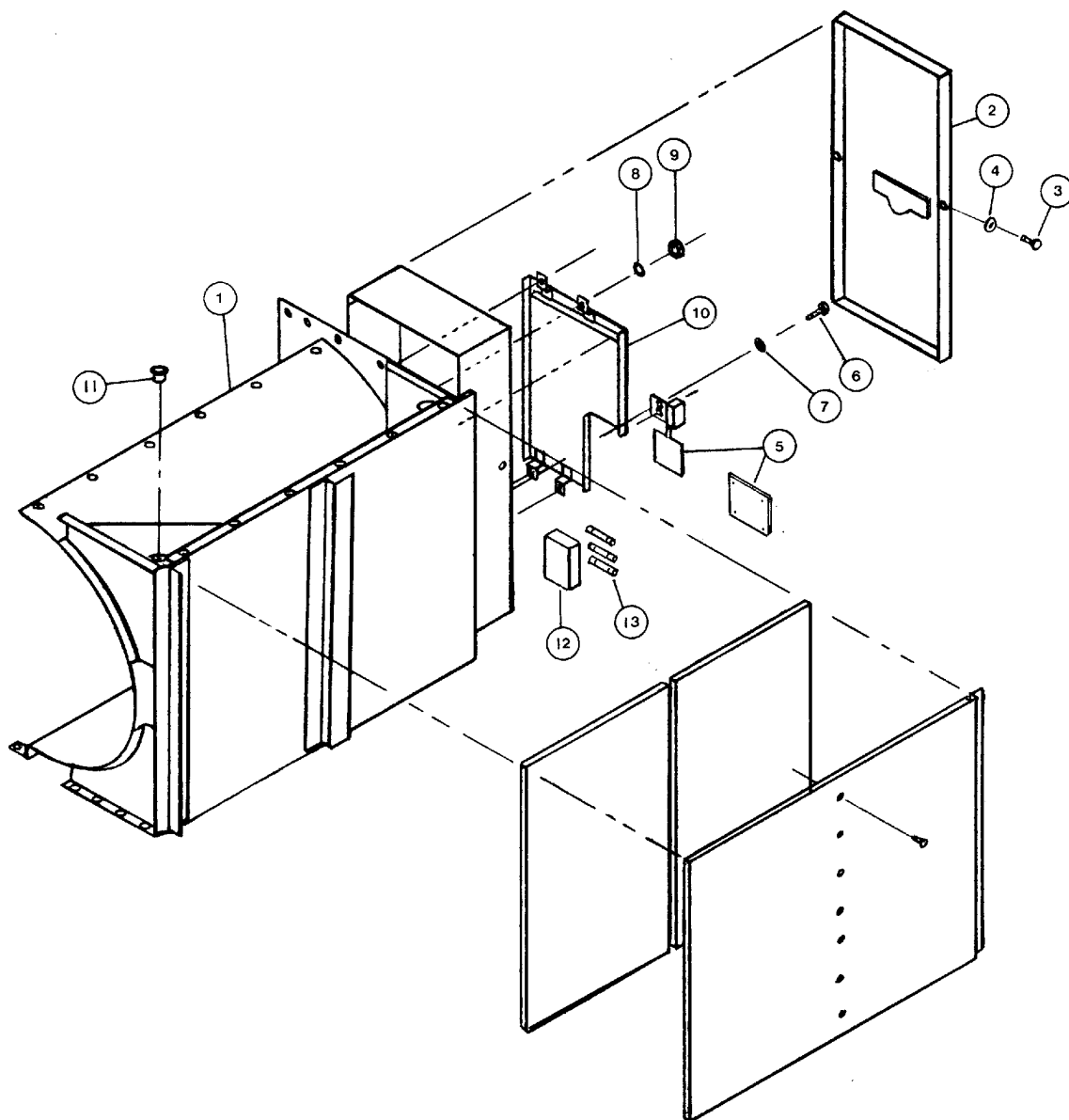
TOP BOLTED SECTION, ELECTRIC - TU11720

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10791	Solid Top	1
2	TU10577	Top Jacket	1
3	P104	1/4" Cut Washer	4
4	FB187	#10 Lockwasher	10
5	TU2842	#10 - 32 Hex Nut	4
6	TU3479	#10 - 32 x 7/16" Screw	4
7	TU11903	Front Guard	1
8	TU2847	1/4" Cut Washer	14
9	M271	#8 I.T. Washer	14
10	M262	#8 - 32 x 3/8" Screw	14
11	TU10481	Access Door w/Insulation	1
12	TU5866	1-1/4" Plug Button	1
13	TU5958	Snap Bushing	1
14	TU10193	Bushing	1
15	TU10646	Disconnect Box	1
16	TU4934	1/4" - 20 x 7/16" Hex Nut	4
17	TU2846	1/4" Lockwasher	14
18	TU11900	Guard Mounting Bracket	2
19	TU3124	3/8" - 16 x 3/4" Screw	6
20	VSB134	3/8" Lockwasher	6
21	TU11850	Bonnet Assembly (see separate page)	1
22	TU11911	Rear Guard	1
23	C249	5/16" - 18 Hex Nut	2
24	TU2814	5/16" Lockwasher	2
25	TU3543	#8 - 32 x 5/8" Screw	8
26	TU10580	Mechanism Box Door	1
27	TU7733	#8 Self-Drill Screw	8
28	TU7476	Fuse, 60 Amp, 600V.	3
29	TU12076	Guard Stop	4

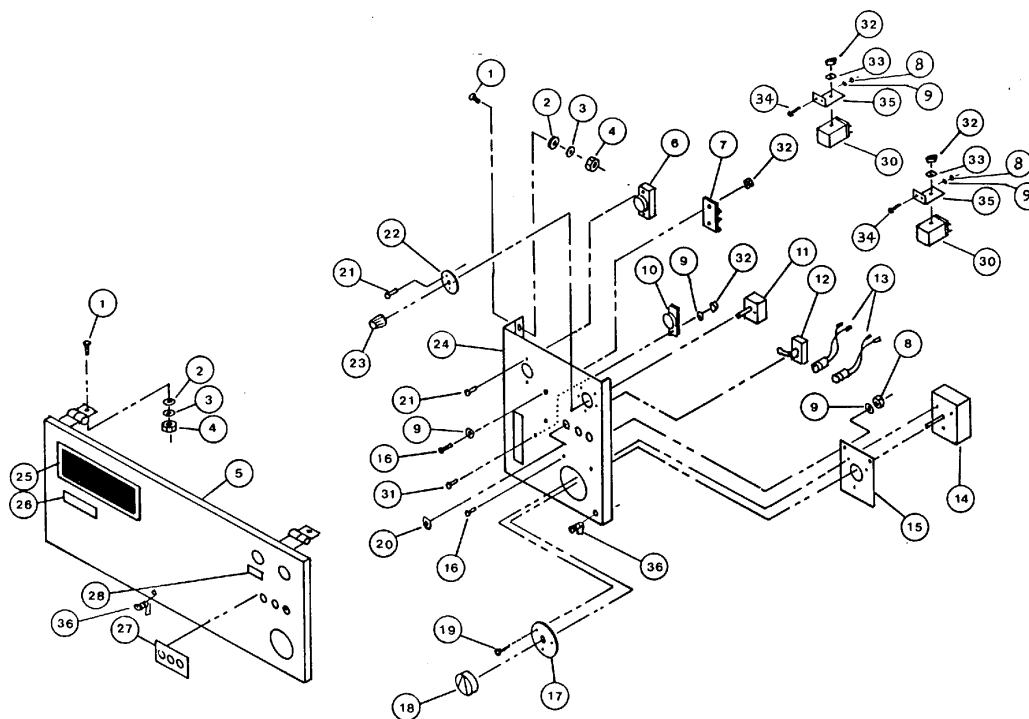
LEFT CENTER BOLTED SECTION - TU11719

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	SC633	Rivet	36
2	M271	#8 Washer	1
3	AT383	#8 - 32 x 1/2" Screw	1
4	TU10528	Thermometer Assembly*	1
5	TU10574	Left Center Jacket	1
6	TU2372	Heyco Bushing	2

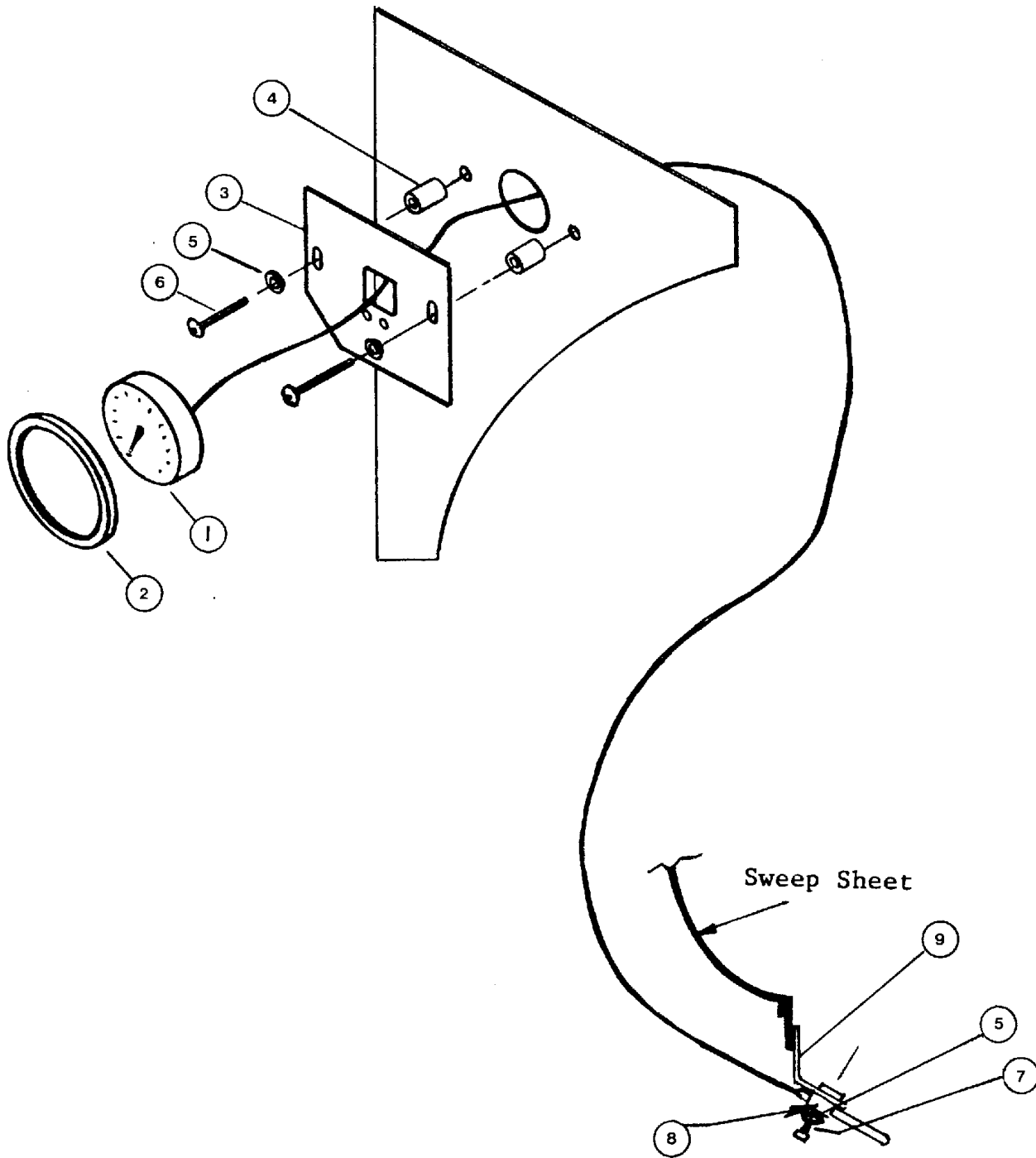
* - See Separate Page

RIGHT CENTER BOLTED SECTION**STEAM - TU11818****ELECTRIC - TU11718**

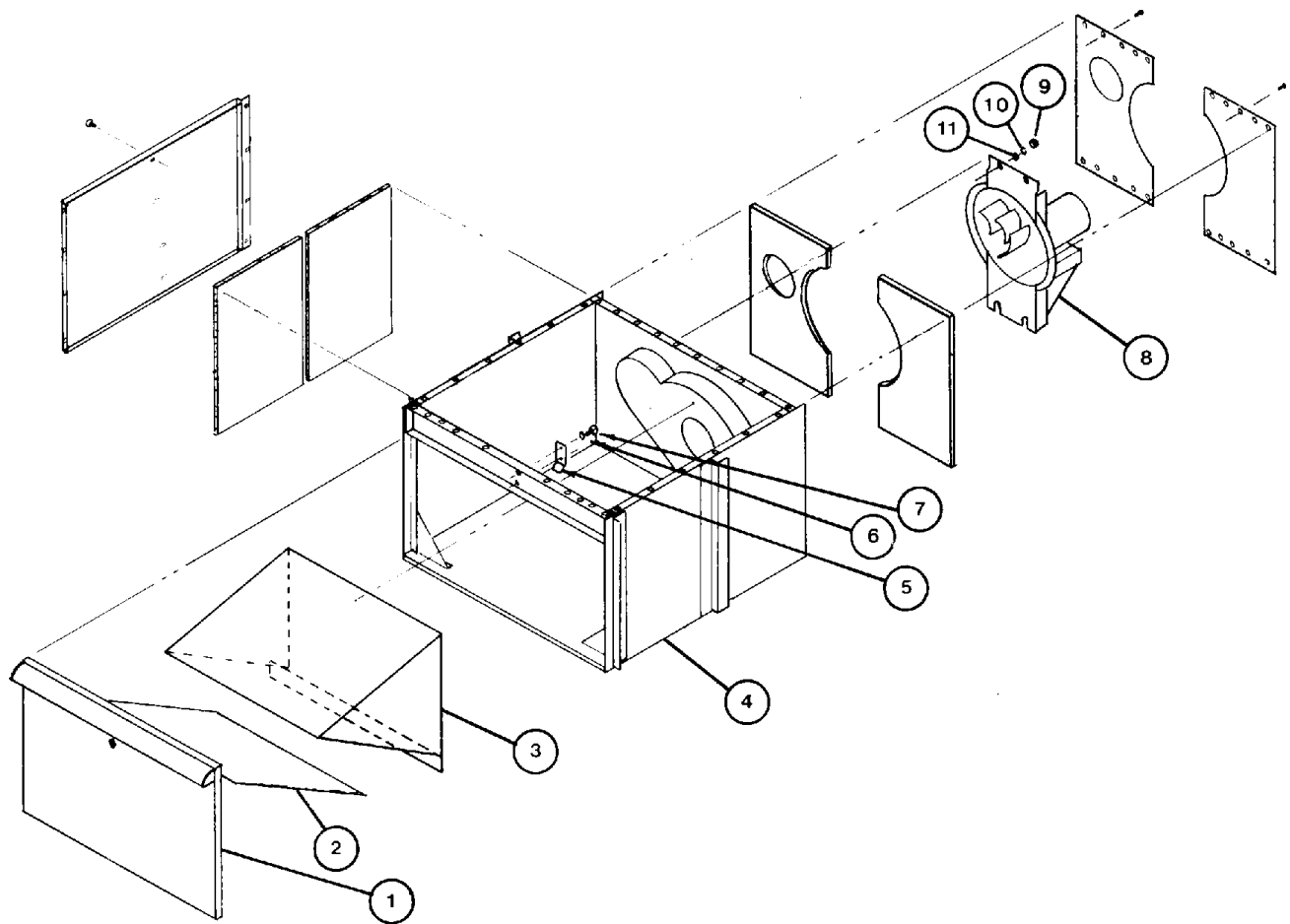
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10573	Right Center Jacket W/A	1
2	TU10591	Control Box Cover Assembly	1
3	SV80	1/4" - 20 x 3/8" Hex Head Bolt	2
4	TU2846	1/4" Lockwasher	2
5	TU8206	Air Switch Assembly - (Electric Only)	1
	TU5507	Cover Plate (Steam Only) #8 - 32 x 3/8" Screw	1
6	M262	#8 - 32 x 3/8" Screw	2
7	M271	#8 Washer	2
8	VSB134	3/8" Lockwasher	4
9	TU4787	3/8" - 16 Hex Nut	4
10	TU10453	Component Assembly - (Electric Only)	1
	TU11812	Component Assembly - (Steam Only)	1
11	TU2372	7/8" Heyco Bushing	1
12	TU8200	Fuse Holder - Electric Only	1
13	TU819905	Fuse - 5 Amp - Electric Only	3

ACCESS DOOR & CONTROL PANEL ASSEMBLY

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU3479	#10 - 32 x 7/16" Screw	4
2	P104	1/4" Cut Washer	4
3	FB187	#10 Lockwasher	4
4	TU2842	#10 - 32 Hex Nut	4
5	TU10480	Access Door Weldment	1
6	PT111	Push-To-Start Button	1
7	TU9343	Terminal Block	1
8	TU3266	#8 - 32 Hex Nut	12
9	M271	#8 I. T. Washer	11
10	TTU101	Buzzer - 110V	1
11	TU3159	Switch, Hi - Lo	1
12	FG147	Switch, On - Off	1
13	TU5421	Lamp, 110V	2
14	TU6109	Timer, 0-60 Min., 110V	1
15	TU10578	Timer Mounting Plate	1
16	RC385	#6 - 32 x 3/4" Screw	2
17	TU5444	Timer Dial	1
18	TU2555	Knob	1
19	TU7733	#8 x 1/2" Self-Drill Screw	3
20	TU3805	15/32" - 32 Lock Nut	1
21	ET208	#6 - 32 x 1/4" Screw	5
22	TU3198	Cover Plate	1
23	TU3164	Knob	1
24	TU10478	Mechanism Box Door	1
25	TU8013	Cissell Nameplate	1
26	TU8014	Therm-O-Cool Nameplate	1
27	TU8418	On - Off Label	1
28	TU10603	Push to Start Label	1
30	TU8599	Relay	2
31	TU3624	#6 - 32 x 1/4" R. H. Screw	4
32	TU3400	#6 - 32 Hex Nut	5
33	FB187	#10 Lockwasher	2
34	SV332	#8 - 32 x 3/8" Truss Head Screw	6
35	TU8709	Relay Bracket	2
36	TU11610	Door Latch	2

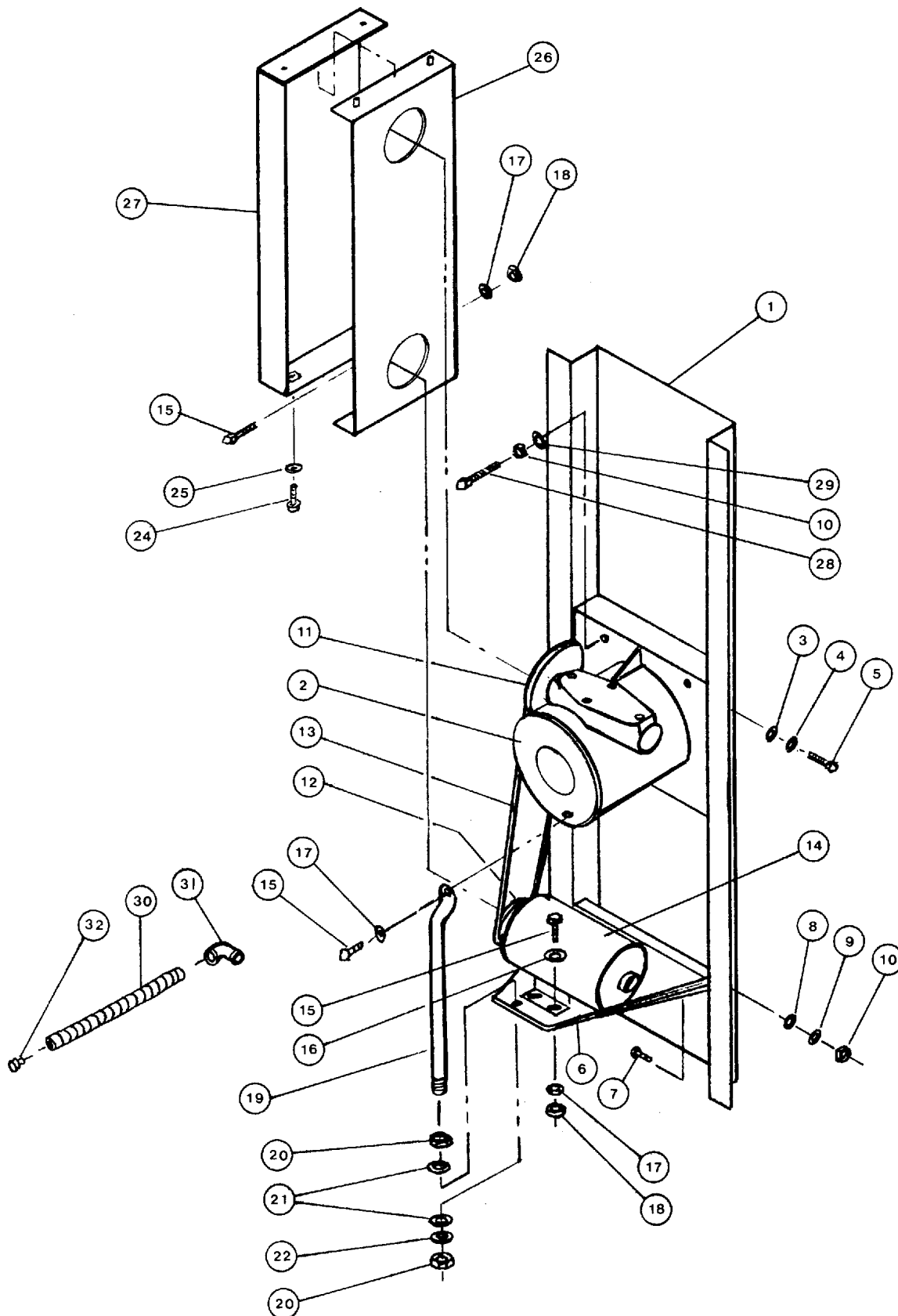
THERMOMETER ASSEMBLY - TU10528

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU3593	Thermometer	1
2	TU2641	Thermometer Gasket	1
3	TU6766	Mounting Plate	1
4	SC153	Spacer	2
5	FB187	#8 Lockwasher	3
6	601367512	#8 - 32 x 1 Truss Head Screw	2
7	M262	#8 - 32 x 3/8" Truss Head Screw	1
8	C257	Clamp	1
9	TU10527	Bulb Mounting Bracket	1

BOTTOM BOLTED ASSEMBLY - TU11717

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10521	Lint Door Assembly*	1
2	TU5261	Lint Screen	1
3	TU10457	Lint Trap Frame	1
4	TU10572	Bottom Jacket	1
5	TU3206	Lock Plate	1
6	TU2846	1/4" Lockwasher	32
7	SV80	1/4" - 20 x 3/8" Hex Head Bolt	32
8	TU10575	Fan Assembly	1
9	TU4787	3/8" - 16 Hex Nut	4
10	VSB134	3/8" Lockwasher	4
11	IB140	3/8" Flat Washer	4

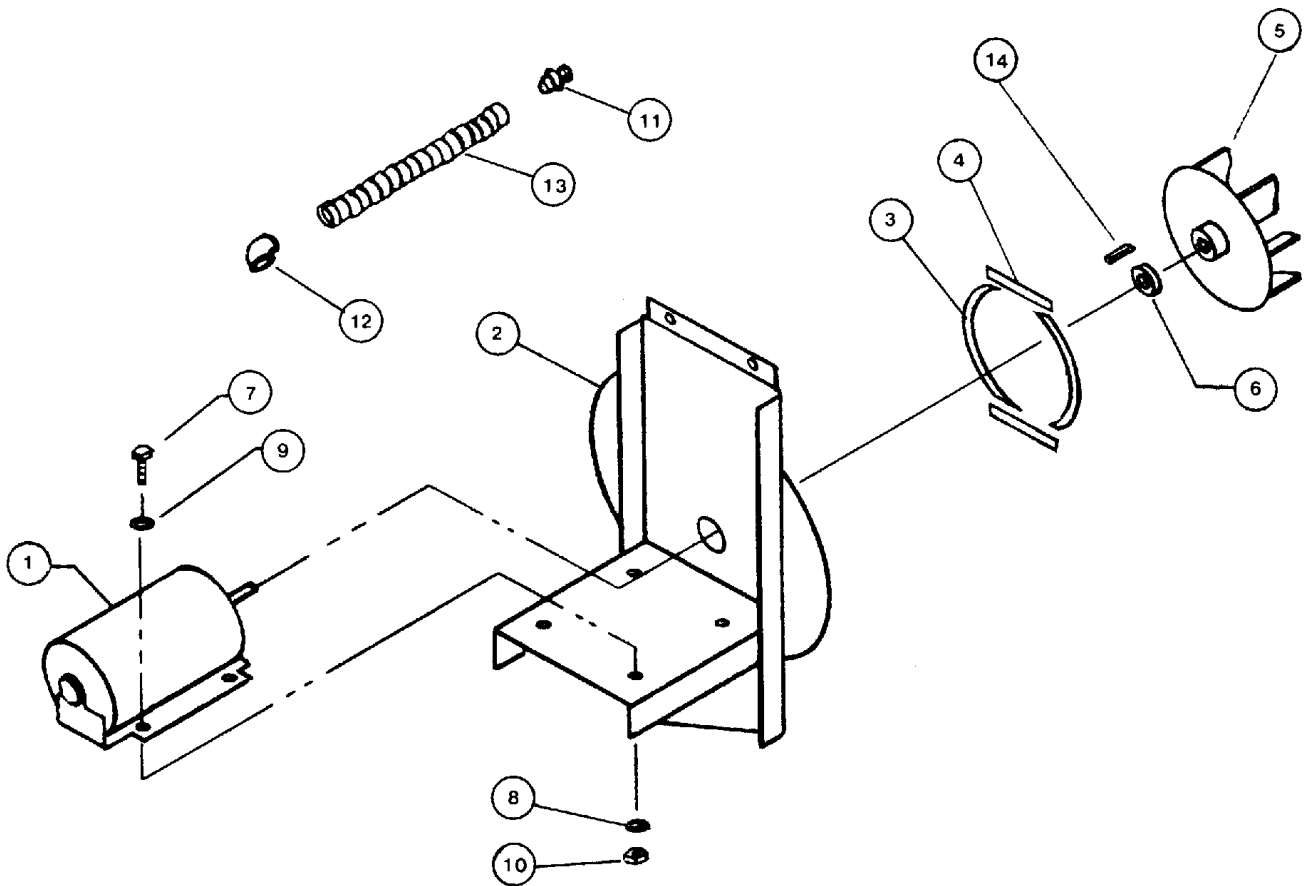
BACK CHANNEL BOLTED ASSEMBLY - TU10600



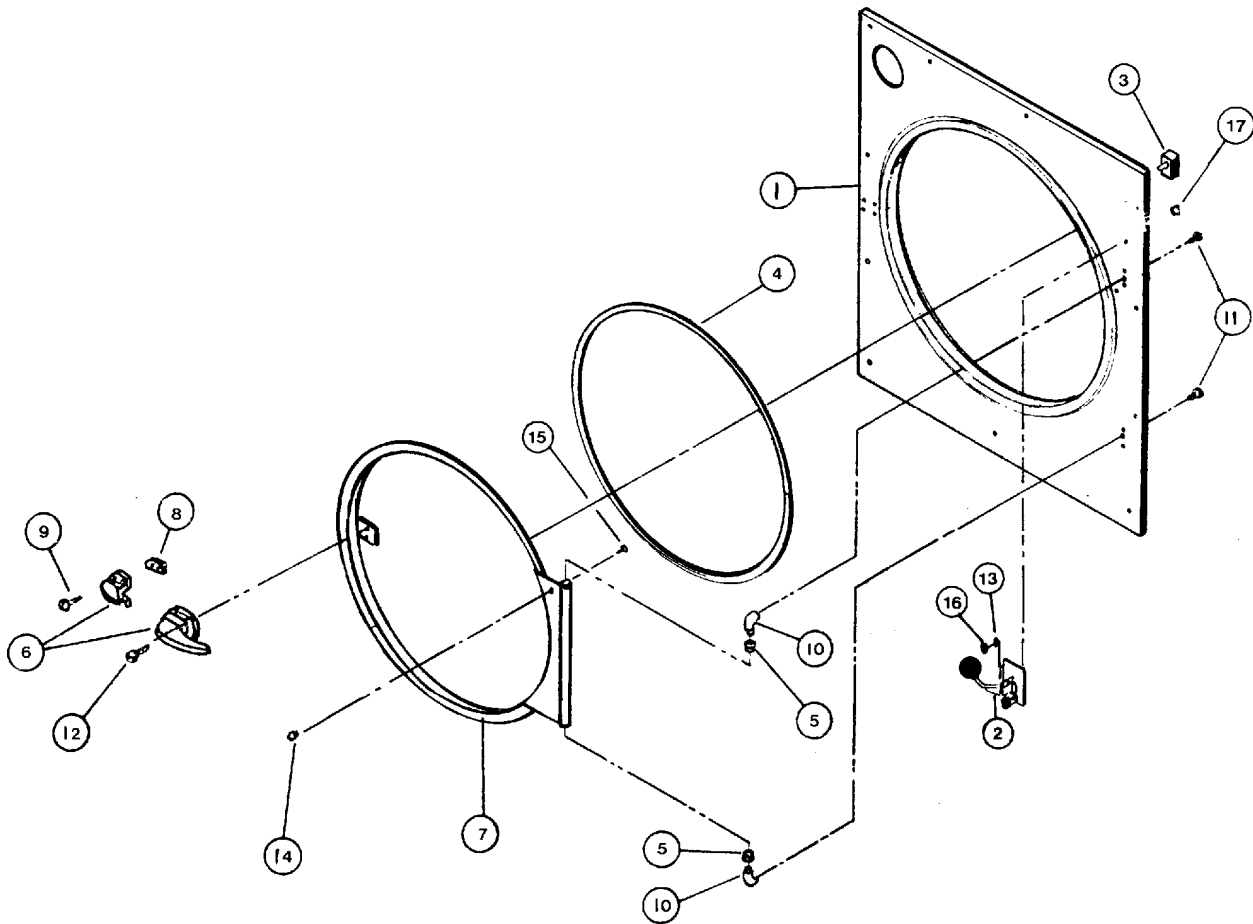
BACK CHANNEL BOLTED ASSEMBLY - TU10600

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10464	Back Channel	1
2	TM100	Gear Reducer	1
3	TU1851	1/2" Cut Washer	4
4	TU2831	1/2" Lockwasher	4
5	RC347	1/2" - 13 x 1-1/4" Cap Screw	4
6	TU33	Motor Drive Bracket	1
7	TU3124	3/8" - 16 x 3/4" Cap Screw	2
8	IB140	3/8" Cut Washer	2
9	VSBI34	3/8" Lockwasher	2
10	TU4787	3/8" - 16 Hex Nut	4
11	TU6722	Sheave	1
12	TU7334	Sheave	1
13	TU2317	V-Belt	1
14	MTR302	Motor, 1/2 H.P., 240/480/60/3	1
15	RC344	1/4" - 20 x 3/4" Cap Screw	5
16	TU2847	1/4" Cut Washer	6
17	TU2846	1/4" Lockwasher	7
18	TU4934	1/4" - 20 Hex Nut	6
19	TU8608	Belt Adjusting Rod	1
20	C249	5/16" - 18 Hex Nut	2
21	VSBI30	5/16" Flat Cut Washer	2
22	TU2814	5/16" Lockwasher	1
24	AT383	#8 - 32 x 1/2" Screw	1
25	M271	#8 Internal Tooth Washer	1
26	TU11802	Belt Guard Mounting W/A	1
27	TU11804	Belt Guard Mounting	1
28	TU8448	3/8" - 16 x 2-1/2" Screw	2
29	TU3243	3/8" Int. Tooth Washer	2
30	504641292	Greenfield Cable	1.04Ft.
31	TU4791	1/2" Elbow Connector	1
32	TU4790	1/2" Straight Connector	1

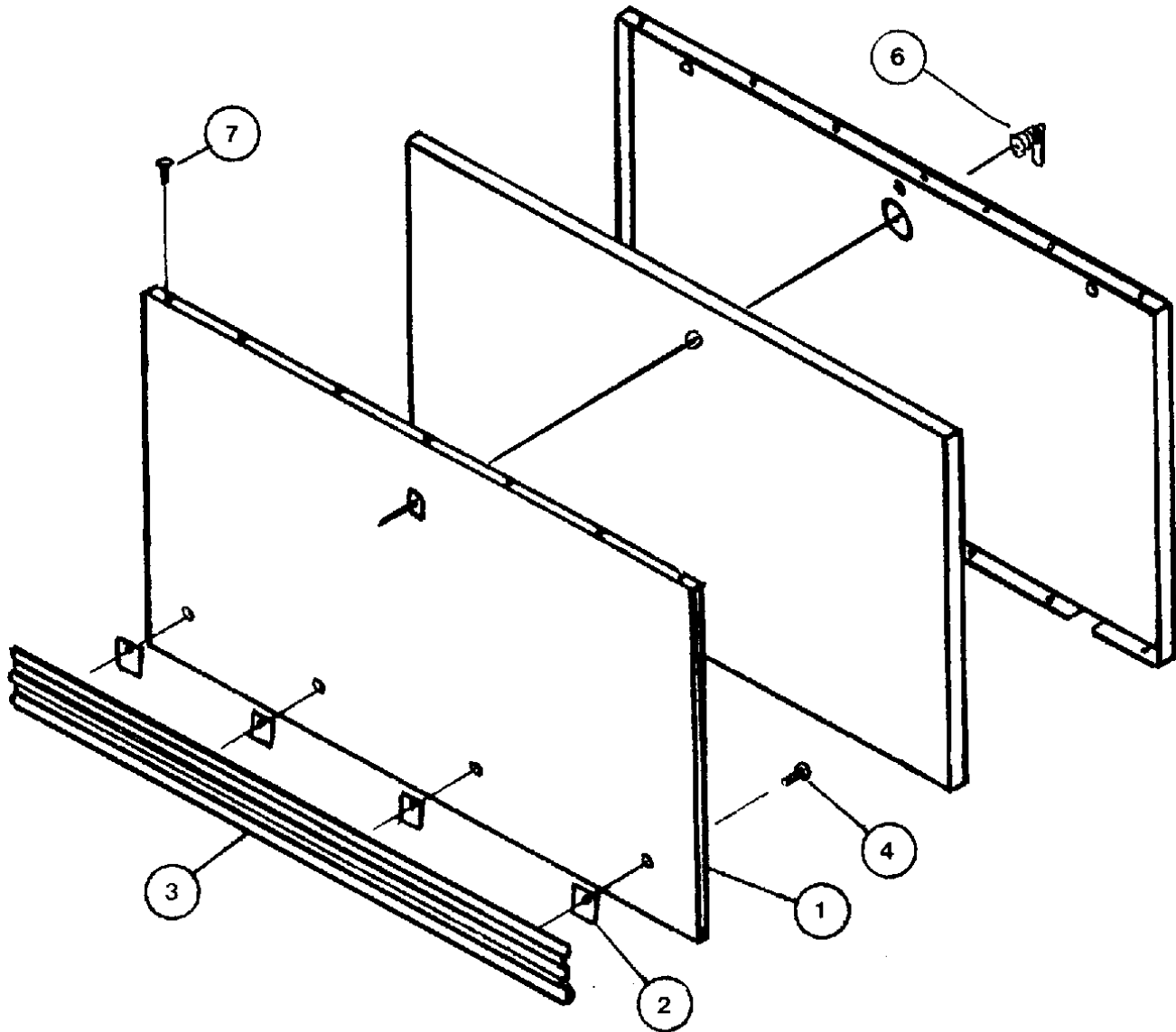
S6162-BS-MMC-010/12489
FAN ASSEMBLY - TU10575



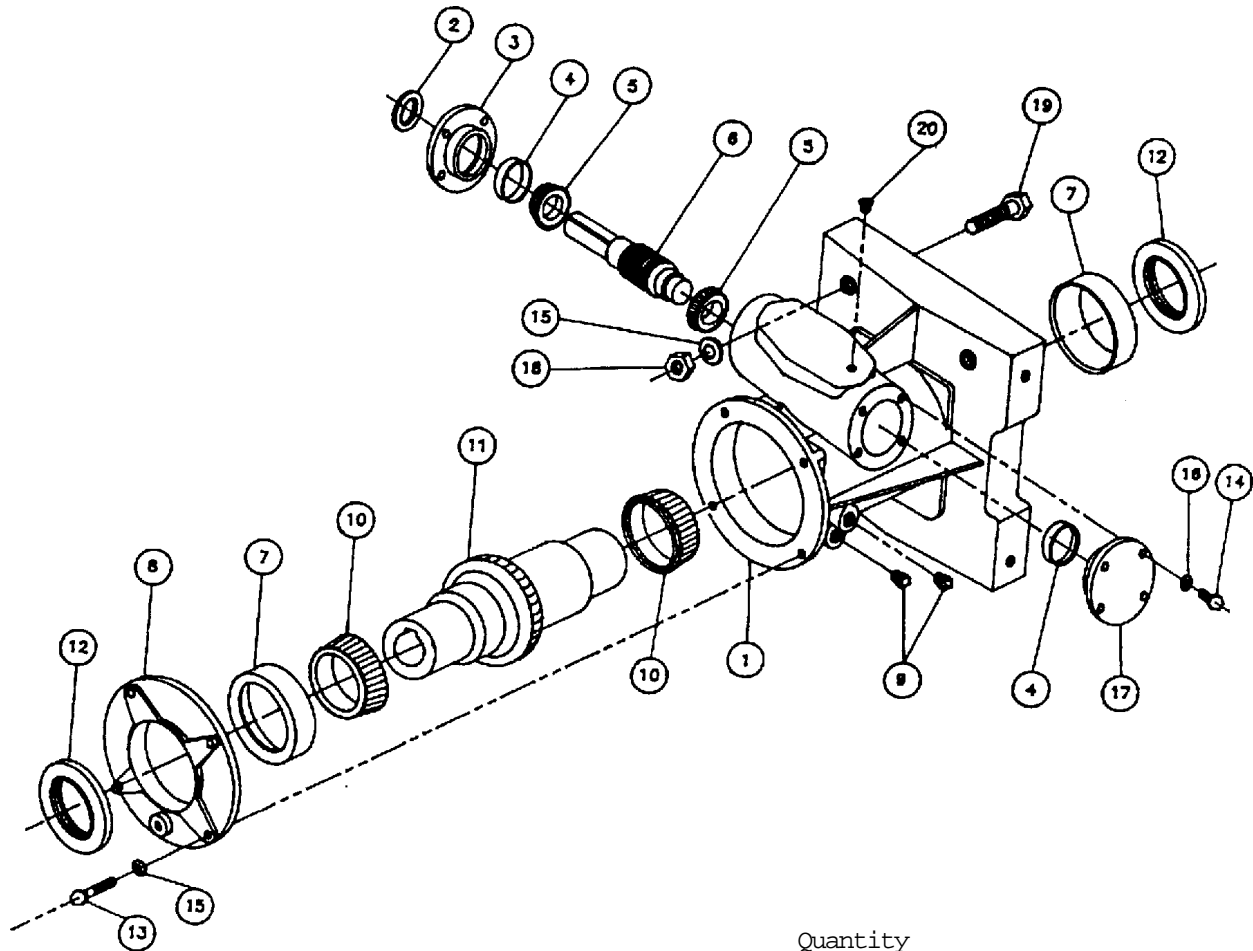
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	MTR302	Motor, 240/480/60/3	1
2	TU10445	Motor Mount W/A	1
3	TU2473	Side Gasket	2
4	TU2474	Top & Bottom Gasket	2
5	TU5874	Fan, 5/8" Bore	1
6	TU2476	Felt Seal	1
7	TU5439	5/16" - 18 x 3/4" Cap Screw	4
8	TU2814	5/16" Lockwasher	4
9	VSB130	5/16" Flat Cut Washer	4
10	C249	5/16" - 18 Hex Nut	4
11	TU4790	1/2" Str. Tomic Connector	4
12	TU4791	1/2" 90° Angle Connector	1
13	504641292	Greenfield Cable	2 Ft.
14	TU4684	3/16" Sq. Key	1

RIGHT HAND FRONT PANEL AND DOOR ASSEMBLY - TU11766**LEFT HAND FRONT PANEL AND DOOR ASSEMBLY - TU11772**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU11767	Right Hand Insulated Front Panel	1
	TU11773	Left Hand Insulated Front Panel	1
2	TU11943	Right Hand Latch Assembly	1
	TU11942	Left Hand Latch Assembly	1
3	FG140	Door Switch	1
4	TU5288	Basket Door Seal	1
5	PIF172	Delrin Bearing	2
6	TUA2319	Door Latch & Keeper	1
7	TU11630	Right Hand Door w/Insulation	1
	TU11793	Left Hand Door w/Insulation	1
8	TU5503	Door Latch Spacer	1
9	TU2687	#8 Screw w/Washer	4
10	TU2236	Hinge Posts	2
11	TU2836	5/16" - 18 x 1/2" Hex Cap Screw	2
12	TU2686	#8 - 32 x 3/8" Ph. Hd. Screw	4
13	F554	#8 Cut Washer	4
14	TU4840	Crown Nut	1
15	TU4839	10 - 32 Screw	1
16	AT383	8 - 32 x 1/2" Screw	4
17	TU10193	Bushing	1

INSULATED LINT DOOR - TU10521

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10525	Lint Door	1
2	TU2710	Trim Holder	4
3	TU2385	Trim	1
4	F557	#10-24 x 3/8" Round Head Screw	4
6	TU11610	Door Latch	1
7	SC633	Rivet	16

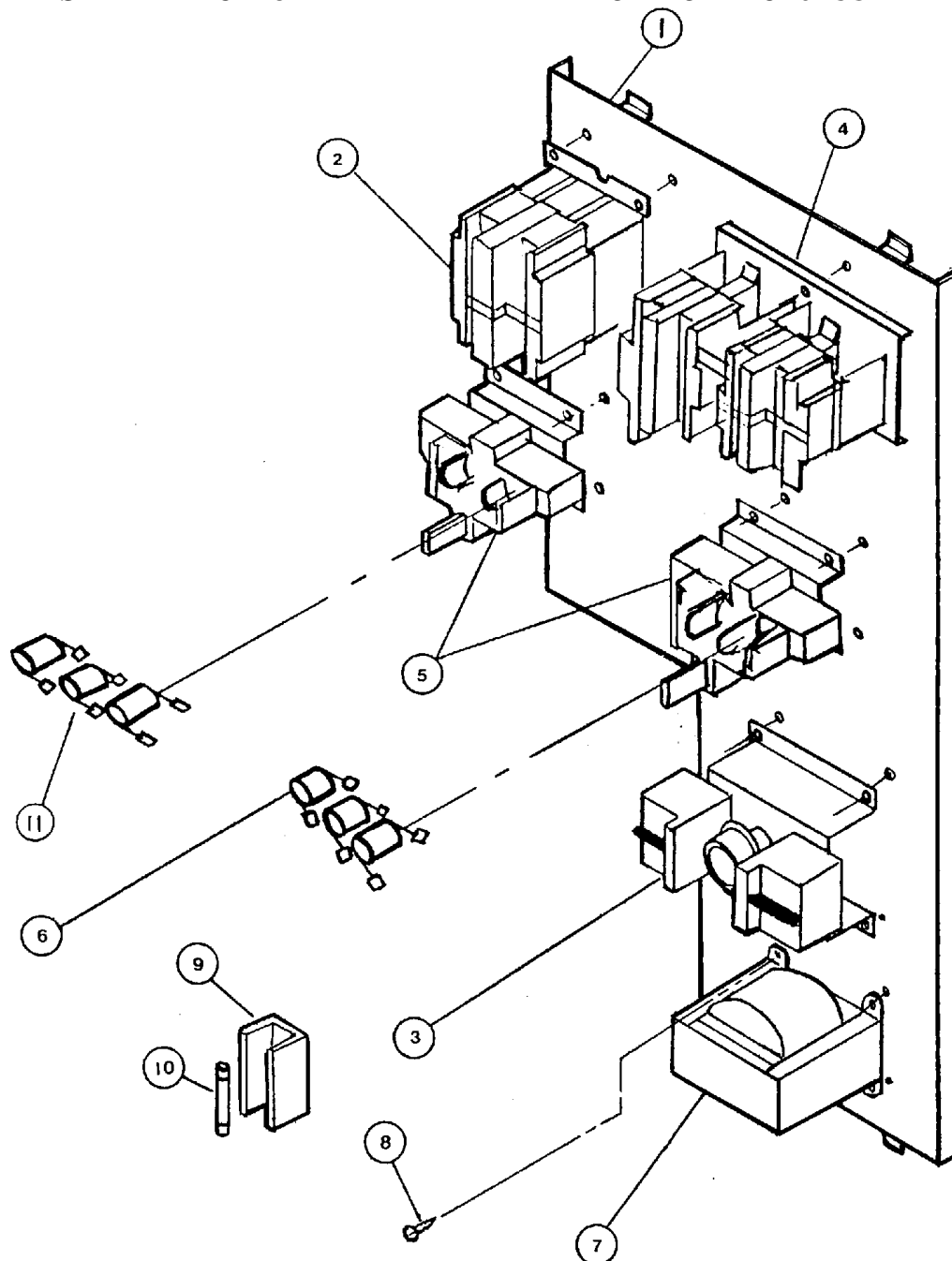
PARTS—SMALL GEAR REDUCER—TM100

			Quantity
1	TM103	Housing	1
2	TM104	Small Seal	1
3	TM105	Small Open End Cap	1
4	TM107	Small Bearing Cup	2
5	TM108	Small Bearing Cone	2
6	TM101	Worm 1-1/2" x 7-1/8"	1
7	TM110	Large Bearing Cup	2
8	TM112	Large End Cap	1
9	TM115	1/4" Pipe Plug	1
10	TM117	Large Bearing Cone	2
11	TM102	Worm Gear	1
12	TM120	Oil Seal	2
13	TU2623	Cap Screw 3/8" - 16 x 1-1/2"	4
14	TU2839	Cap Screw 1/4" - 20 x 7/8"	8
15	TU3243	3/8" Internal Tooth Lockwasher	6
16	RC349	1/4" Internal Tooth Lockwasher	8
17	TM118	Small Closed End Cap	1
18	TU4787	3/8" - 16 Hex Nut	2
19	TU3211	3/8" - 16 x 2-1/2" Screw	2
20	TM119	Vent Plug 1/4" NPT	1

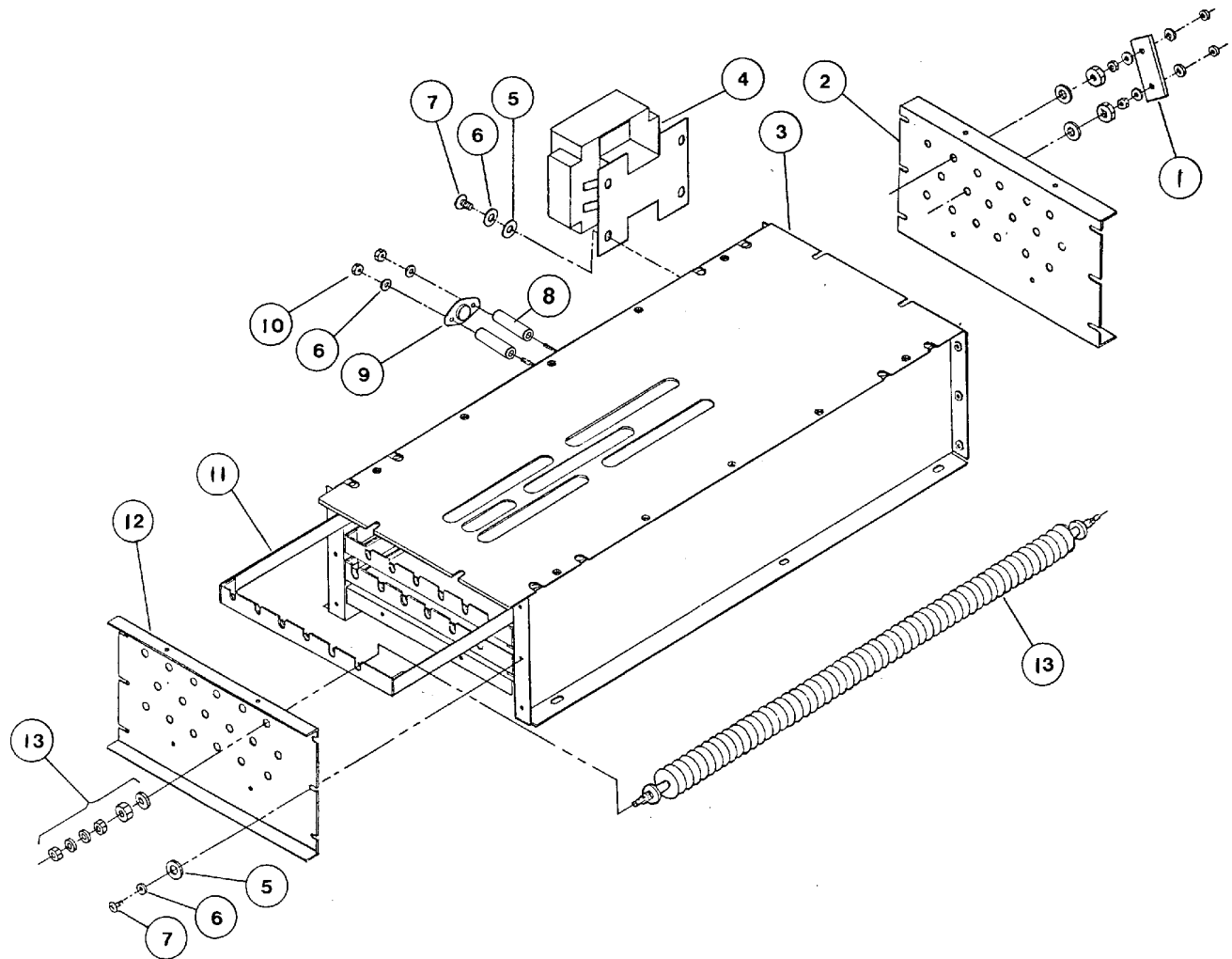
CONTROL BOX COMPONENT ASSEMBLY

STEAM - TU11812

ELECTRIC - TU10453



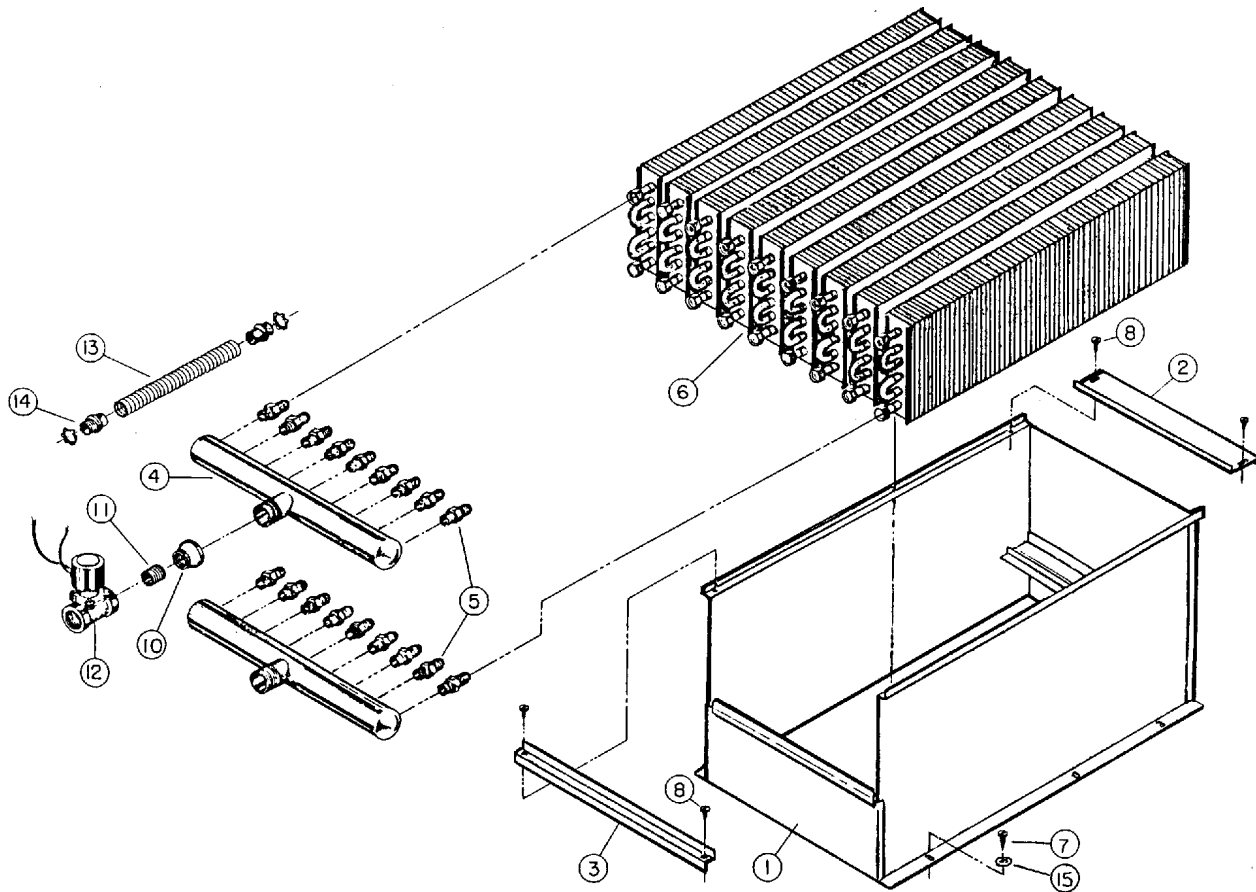
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU10581	Reversing Control Panel	1
2	TU6965	Contactor, 3 Pole Single	1
3	TU44131	Timer, Reversing	1
4	TU7252	Contactor, 3 Pole Double	1
5	TU6774	Thermal Overload	2
6	TU267911	Basket Overload Heater	3
7	TU4660	Transformer	1
8	M262	#8 - 32 x 3/8" Screw	22
9	TU7505	Fuse Holder	1
10	TU8279	Fuse, 1 Amp	1
11	TU267909	Fan Overload Heater	3

ELECTRONIC HEATED BONNET ASSEMBLY - TU11850

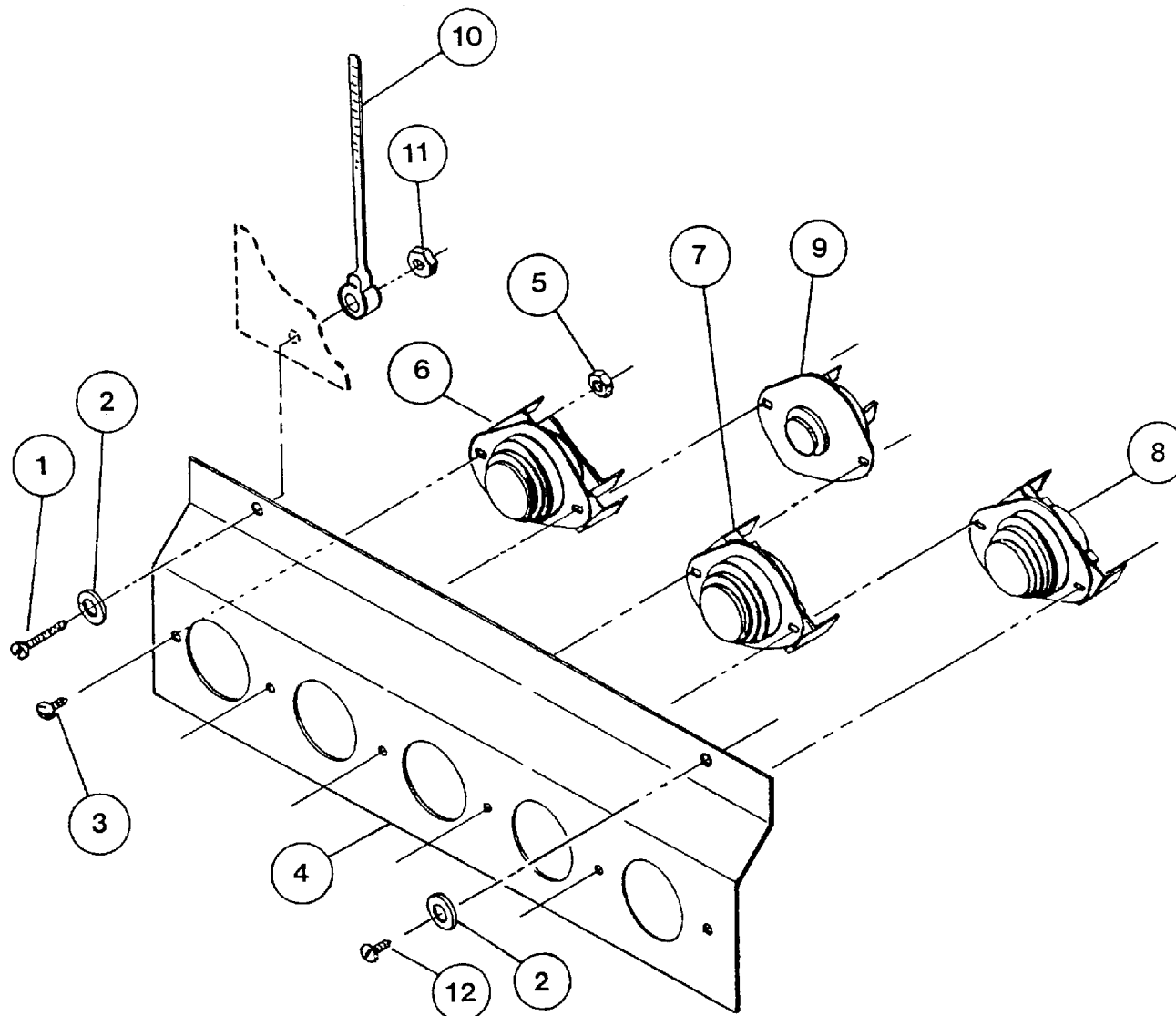
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU11352	Small Brass Buss Bar	9
2	TU11844	Rear Panel	1
3	TU11849	Bonnet	1
4	TU7240	Contactor - 120V, 60A	1
5	TU2847	1/4" Flat Washer	32
6	M271	#8 Lockwasher	34
7	M262	#8 - 32 x 3/8" Screw	24
8	TU11722	Spacer	2
9	TU13738	Thermostat - 150° F	1
10	TU3266	#8 - 32 Hex Nut	2
11	TU11845	Heating Element Rack	3
12	TU11843	Front Panel	1
13	TU11355	Heater Rod w/Hardware	18

NINE SECTION STEAM BONNET ASSEMBLY

TU11202 9 Section Steam Bonnet Assembly w/Solenoid Valve 120V



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	TU11203	Housing Weldment	1
2	TU2547	Front Coil Retainer	1
3	TU2548	Rear Coil Retainer	1
4	TU2413	Steam Coil Manifold	2
5	TU2414	3/4" - 16 x 3/8" Straight Connector	18
6	TU2405	Steam Coil 7-3/4" W x 1-5/8" H x 26" Lg.	9
7	TU3124	3/8" - 16 x 3/4" Bolt	6
8	M263	#8 x 3/8" S. M. S.	4
10	TU2735	1" x 3/4" Reducer	1
11	TU4608	3/4" x 2" Pipe Nipple	1
12	TU6041	Solenoid Valve 120V, 50 or 60 Cycle	1
	TU7151	Replacement Coil for 120V. Solenoid	
13	50-4641-292	Greenfield Cable, 1/2" (Specify 21" Long)	1.75 Ft.
14	TU4790	1/2" Straight Conn.	2
15	VSB134	3/8" Split Lockwasher	6

THERMOSTAT ASSEMBLY - TU10796

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Quantity</u>
1	601367512	#8 - 32 X 1" Truss Hd. Screw	1
2	M270	Washer	2
3	TU3624	#6 - 32 x 1/4" Screw	5
4	TU5143	Mounting Bracket	1
5	TU3400	#6 - 32 Hex Nut	5
6	TU2045	Cool-Down Thermostat	1
7	TU3240	Thermostat - 185° F	1
8	TU5149	Thermostat - 165° F	1
9	TU11199	Safety Thermostat Assembly	1
10	FG148	Clamp	1
11	TU3266	#8 - 32 Hex Nut	1
12	M262	#8 - 32 x 3/8" Truss Head Screw	1

TWL1467

CONTROL WIRING

440 VOLTS

H1 H3 H2 H4

X4 X2 X3 X1

120 VOLTS
200VA

BONNET HI LIMIT
B-150

1A 250V

RD

WH

BK

BLOWER MOTOR OL's

BASKET MOTOR OL's

DOOR SWITCH

BN

R1

TB

YL/BL

BZ

TM

R1

R2

BL

THERMO-COOL

M-155
B-135

QR

YL

L

H

YL

H

SAFETY

B-165

B-185

B-230

EC

DR

TA

AIR SWITCH

OR/BK

DRYING

N

COOLING

N

REV. TIMER

FW

RV

M

BR

NOTES:

1. TIMER CONTACTS TA TRANSFER FIRST ON TIME COUNTDOWN.

1. TIMER CONTACTS TO
TRANSFER FIRST ON
TIME COUNTDOWN.

ALL WIRING THIS PAGE
14 AWG 125°C AWM



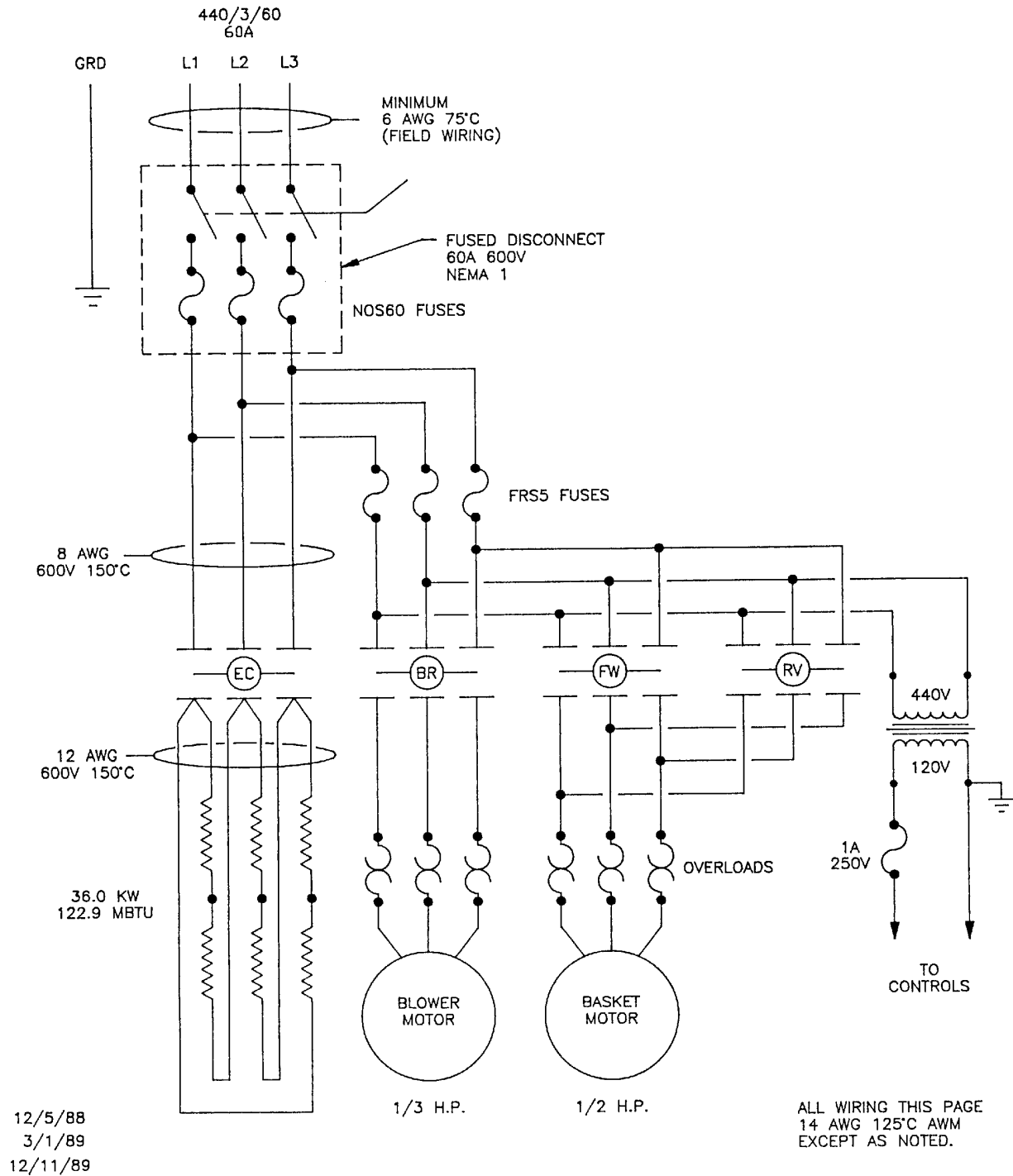
WIRING SCHEMATIC

TWL 1420

L36TD30ME

POWER WIRING

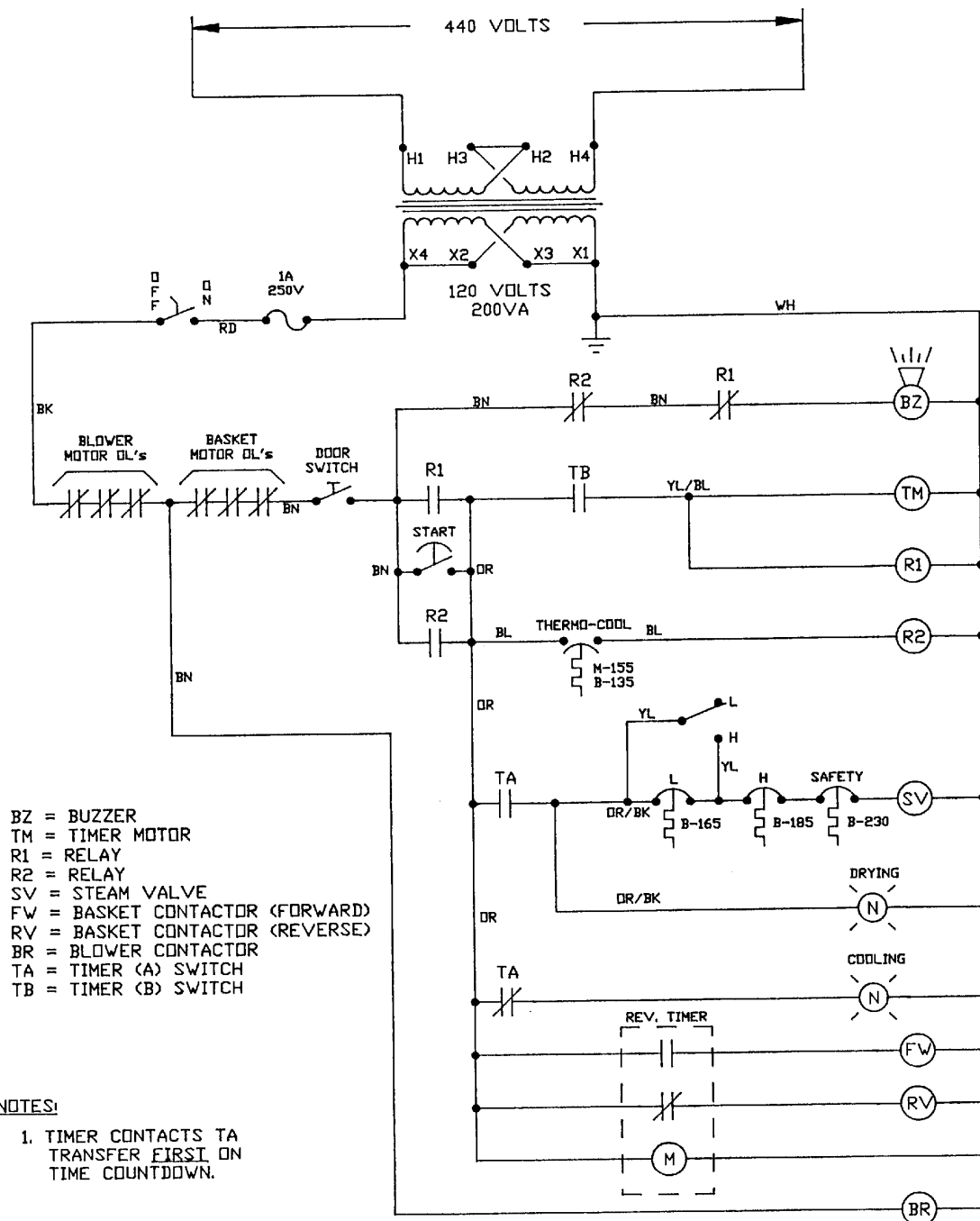
440 VOLTS WITH 120 VOLT CONTROLS



TWL1468

CONTROL WIRING

440 VOLTS WITH 120 VOLT CONTROLS



ALL WIRING THIS PAGE
14 AWG 125°C AWM



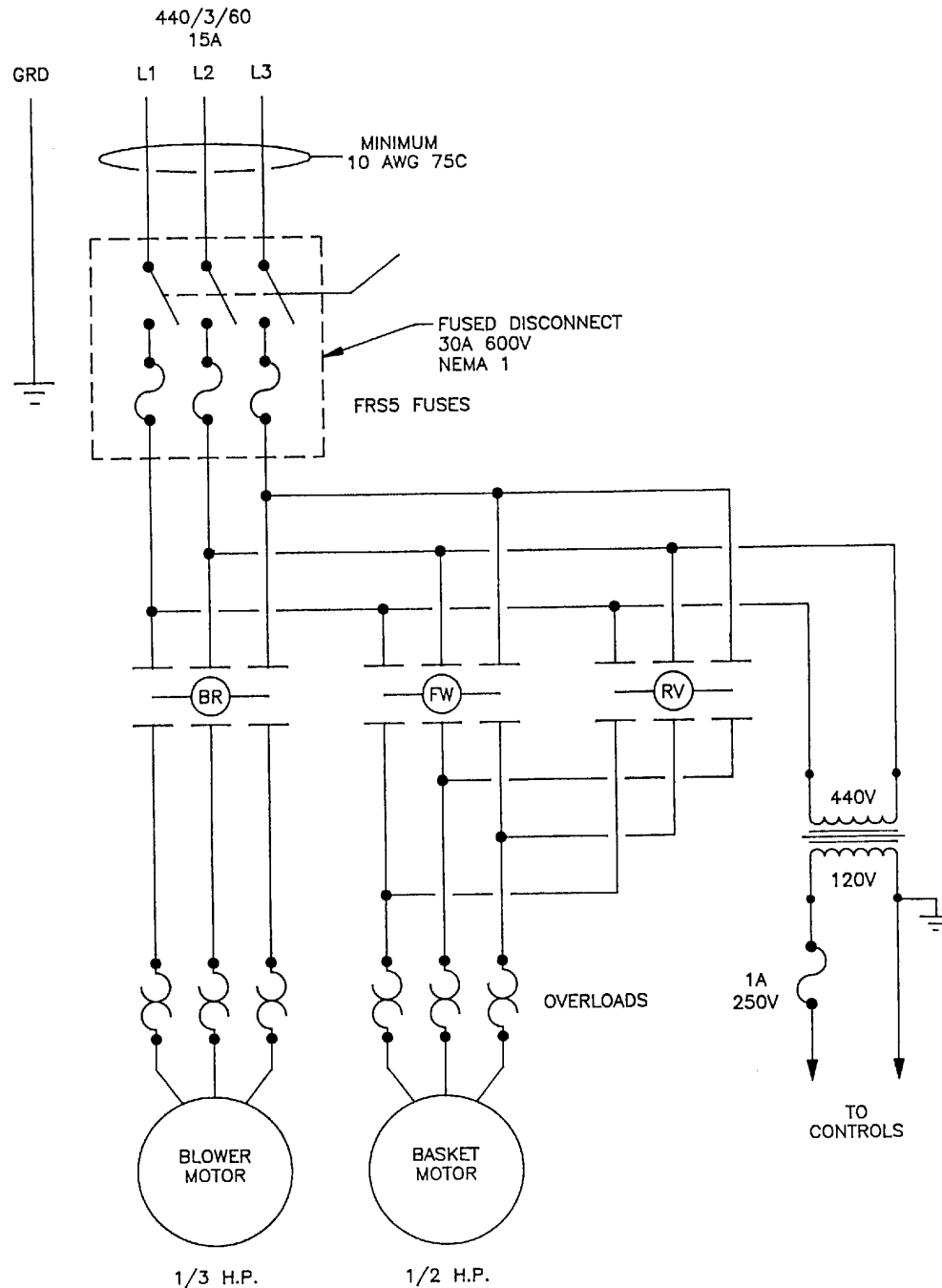
WIRING SCHEMATIC

TWL 1427

L36TD30MS

POWER WIRING

440V VOLTS WITH 120 VOLT CONTROLS



12/5/88
3/1/89
12/11/89

ALL WIRING THIS PAGE
14 AWG 125°C AWM
EXCEPT AS NOTED.